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P R O C E E D I N G S

of the

SELECT COMMITTEE APPOINTED BY THE ONTARIO LEGISLATURE  
TO ENQUIRE INTO CERTAIN MATTERS AND LEGISLATION  
REGARDING SMOKE CONTROL AND AIR POLLUTION IN ONTARIO.

Mr. A. H. Cowling, Chairman.

Dr. F. A. Evis, Secretary.

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VOLUME XL

Wednesday, November 14th, 1956,

BROCKVILLE, Ont.

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R. C. Sturgeon,  
Official Reporter,  
Parliament Buildings,  
Toronto, Ontario.





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F O R T I E T H            D A Y

Brockville, Ontario,  
Wednesday, November 14th, 1956,  
8:00 o'clock, p.m.

- - - -

The further proceedings of this Committee  
reconvened pursuant to adjournment.

Mr. Alfred H. Cowling, Chairman,  
Presiding.

PRESENT:

Messrs. Elliott,  
Morningstar,  
Murdoch,  
Gordon,  
Thomas (Oshawa),  
Dr. F. A. Evis, Secretary.

APPEARANCES:

Mr. J.W.C. Langmuir,	Mayor, Brockville.
Mr. J. K. Hanna,	Clerk, Brockville.
Mr. J. A. C. Auld,	M.P.P. (Leeds).
Mr. H. J. Ranson,	Mayor, Prescott.
Alderman A. W. Storey,	Brockville.
Alderman James Delaney,	Brockville.
Alderman Cunningham,	Brockville.
Alderman Donovan,	Brockville.





Mr. Robt. Stratton,	Chief Engineer, Brockville General Hospital.
Mr. David Muir,	Citizen.
Mr. M. Jarvie,	Engineer, Ont. Hospital.
Mr. H. P. Courtney,	Chief Engineer, Du Pont of Canada.
Mr. W. Sutherland.	
Mr. Eric Monk.	
Mr. Currie,	
Mr. H. Fraser.	

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---The following proceedings were held at the Municipal  
Council Chamber, Victoria Building, Brockville.

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THE CHAIRMAN: Ladies and gentlemen, I think we will bring the meeting to order, and I would like to introduce you to the members of our Committee, and tell you a bit about why we are here and what we are doing.

My name is Alfred Cowling. I am the member for High Park riding, in Toronto, and it is my pleasure to be Chairman of the Committee. Over here is Mr. Ellis Morningstar, member for Welland; Mr. Robert Elliott, member for Hamilton East; Mr. George Gordon, member for Brantford; Mr. Thomas Thomas, the member for Oshawa; Mr. William Murdoch, the member for Essex South; Doctor Evis, our Secretary and technical advisor. That pretty well takes care of everybody.

Your fine member, Mr. "Jimmy" Auld, has just come in. Would you come to the front, please? This might be a very opportune time for you to say something and maybe tell the folks how happy you are to have the Committee here. Will you do that?



MR. AULD, M.P.P.: Mr. Chairman, ladies and gentlemen; the Chairman has just said exactly what I wanted to say. I am pleased there are a goodly number of people here tonight. I think the Committee had an opportunity this afternoon to see some of the problems at places where they might occur; and I think it is likely that in some places, they knew you were coming. I think you had a good look around.

I know as far as Leeds County is concerned, we are all very pleased that the Committee has seen fit to come down here to see our problems; and I hope the people who are here tonight will not be hesitant in saying whatever is on their minds and asking for the information which, I am sure, the Committee can give to us as a result of its investigations in the province and other places.

I do not think I need to welcome you again, since we have been together all afternoon, but thank you, "Alf", (Mr. Cowling, Chairman), for the opportunity of saying something; and again, I hope everyone will speak their minds to the Committee.

THE CHAIRMAN: Thank you very much.

Friends, as you know, this is an all-Party Committee. We think that the problem of air pollution and smoke control is one that transcends Party lines. Represented on this Committee, are members of the





Conservative Party, the Liberal Party and the C.C.F. Party; so you are getting a good cross-section of what everybody thinks; and when we make our final report and recommendations to the Legislature, you can appreciate the fact that it will be on behalf of all Parties in the House.

This Committee was first started early in 1955, at our Session in March. Before we really got into the subject, an election was called, in June, 1955, and we all took a rest. The Committee was reconstituted in September, 1955; and I want to assure you that we have been very active since that time.

We have toured extensively throughout the province of Ontario, visiting such large centres as Windsor, Sarnia, Sudbury, Hamilton, Niagara, Welland, Toronto, Peterborough, and so on. We have also visited some of the larger centres in the United States, particularly where they have problems similar to ours. We have been to Los Angeles, San Francisco, Chicago, Detroit, and Philadelphia. We went to Pittsburgh to hear the "Pittsburgh Story", and to New York and several other cities.

I do feel that your elected representatives have gained a great deal of useful knowledge in the past year.





and a half, which will of course be considered in preparing our report to the Legislature at its next regular meeting.

We find the meetings with the people in communities such as Brockville have been very helpful to us. They have given us an idea of local problems. We are familiar with them, because we all have local problems at home.

I think that is sufficient to tell you what we are doing. It is a very important study; and everywhere we have gone, here and in the States, the Committee was congratulated on getting busy doing something about this problem of smoke and air pollution before our province gets into the condition in which some of the large centres in the States are today.

So, without further ado, I would like to ask if there are some citizens here tonight who would like to address the Committee. The proceedings will be very informal. If you have anything to say, please feel free to say it.

I notice that His Worship Mayor Ranson, of Prescott, is here this evening. I think he would like to be introduced so you will be aware he is here.

Would you care to say something, Mr. Mayor, while you are on your feet?



HIS WORSHIP MAYOR RANSON (Prescott):

Yesterday morning, Mr. Cass, Q.C., the member for Grenville-Dundas, phoned from Winchester, saying there was a meeting here this evening.

We have already received and answered an enquiry in connection with smoke control, that we, too, have smoke problems in Prescott; not in an extensive way, but nevertheless, in the east end of our main street we do have a large C.P.R. yard and roundhouse, situated right at the end of the main "drag", and when the wind is off the river, which is generally before a storm, we have a great deal of trouble.

Also we have a couple of small factories which are situated right in the centre of the town, one block south of Main street, in the business section, and the same thing occurs.

The C.N.R., of course, has trains too, further up, but they are not so bothersome, because the population is not as heavy up around the Canadian National as it is at the Canadian Pacific yard and roundhouse.

With a couple of these small plants just off Main street, we do have a certain amount of trouble, even in our City Hall. The smoke will seep through the double windows. So we would be glad if the Committee would see fit to suggest some method of smoke





control.

THE CHAIRMAN: We have with us, Alderman Delaney and Alderman Storey, of the Council of Brockville, and I know the Mayor intends to be present. Mayor Langmuir is at another meeting in the City Hall at present. Alderman Delaney is on the smoke control committee for the city of Brockville; and maybe the Alderman would like to make some comment at this time.

ALDERMAN DELANEY (Brockville): Thank you, Mr. Chairman, members of the Committee, and ladies and gentlemen.

I have had the privilege of serving the people here for the last four years as Alderman for the south Ward, where we have a great problem from smoke pollution.

It was brought to my attention my many citizens, a number of whom are not here this evening.

The real battle started when we had a committee formed by our Mayor Langmuir early in 1956. It was really only at that time that all the complaints which have risen over the last few years, have started to be put together. I am sorry the Chairman is not here, and I also regret that so many citizens affected in the other Ward, which is the area in which we are, are also not here. There certainly is great need for



a control of some description. I say so on behalf of the people, and on the strength of many reports which could be very easily obtained, and could be substantiated by the people, and would have a great bearing on the need for such a control.

We ourselves are one of the great offenders. I mean the Town Hall, - - Victoria Hall. We have said that this year we are not going to offend our own or other areas, as we have now done a window-sealing job.

It is regrettable that there are not more here from the area which is so seriously affected. We have great need for some kind of control, and I am sure that this Committee which has been appointed, and which is representative of the different political Parties, and is making a careful study of the question, will do something which will provide definitely ways of prevention and control.

As I have said, it is too bad there are not more here who could substantiate the conditions in the area which is being affected. There is one present here, whom I see, Mr. Muir, who should be able, I think, to contribute something towards substantiating what I have already said.

THE CHAIRMAN: Thank you very much, Alderman.





What about Alderman Storey? Would you like to make a comment here?

ALDERMAN STOREY: Thank you, Mr. Chairman.

It so happens that the formation of our committee

resulted from repeated complaints as to one particular industry in Brockville -- Dominion Storage.

Efforts have been made on its part to try and curtail some of the smoke.

Since the announcement of the meeting a week ago, I have had several telephone calls in respect to St. Vincent Hospital, and also a factory building which is contributing to the smoke condition in Brockville, and provision has been made this year for a change in the heating plant. It would have been changed this year, but we have not been able to get a contract soon enough. The intention is to change to oil heating.

I understand this is not a smoke-control Committee, it is an air-pollution Committee. As a matter of fact, industries could turn out pollution in an area which could be just as objectionable as smoke, and I think we should not speak only of what we can see in the air; it is the other unhealthy conditions which can be added to the air, which can affect our breathing, and so on.



So could you not consider air pollution as well as smoke control?

THE CHAIRMAN: It is an all-inclusive Committee. It covers air pollution in every phase, including smoke.

ALDERMAN STOREY: It seems to be the consensus of opinion in the town that it has just been for the control of smoke; that is, what we can see in the air. Types of industry which might be located possibly in the town could cause as serious health conditions as the smoke in itself. There are new small industries in the town which contribute considerably, some of them in the west end. One gives out a tremendous amount of smoke in the evening. Another condition which has been reported has to do with the T. Eaton Company. I understand they are burning oil; nevertheless, they seem to be giving out quite a noticeable odour at times.

So I hope, as there are people who must be interested in smoke control, we shall hear from every citizen, and get a good cross-section of opinion.

THE CHAIRMAN: Thank you very much, Alderman.

Just to clear up this point: the Committee is charged with the duty to report to the Ontario Legislature on the matter of air pollution and smoke





control. You are quite right in saying that we are mainly concerned with smoke, dust, dirt and flyash, because that is what we can see. But it is a fact that many dangers of air pollution are contained in that which you cannot see.

We have made also quite a study of these pollutants.

It is an all-inclusive Committee, having to do with everything connected with bad air: let us put it that way.

Now, we would like to hear from some of the citizens who are on the receiving end.

MR. MUIR: The smoke stack emits practically no smoke at all.

THE CHAIRMAN: What do they burn?

MR. MUIR: Oil. It is well under control, and you cannot complain about it. But from what I am told, they try to reclaim wiring by burning off the insulation, which is plastic and rubber. We complained quite bitterly a few years ago, and they did a very good job on it. They built an incinerator at great cost, and when that incinerator is in use it is not too bad.

The stack is high enough to disperse air properly, but it seems that sometimes they have not



enough wiring to warrant burning in the incinerator, so they put it aside and burn it on the ground. If the prevailing winds are from the west, - - and they generally are, - they blanket the whole area with greasy black smoke. I have actual photographs of the subdivision before and after. That is our own particular problem. It is not the whole plant.

MR. ELLIOTT: It is the copper wire?

MR. MUIR: They buy copper wire. That is our own particular problem. It is not the whole plant.

MR. ELLIOTT: They buy scrap wire?

MR. MUIR: No, it is their own wire which they manufacture. They burn off the insulation and reclaim the copper.

MR. ELLIOTT: That makes a bad smell?

MR. MUIR: It is not the smell, it is these black greasy blobs of soot.

MR. ELLIOTT: Is it rubber, or synthetic rubber?

MR. MUIR: I image it is rubber and synthetic combined.

MR. ELLIOTT: The incinerator is all right, is it?

MR. MUIR: It seems to be allright. Not too bad. Yesterday, for instance, they did not have enough





wire or whatever they were burning to warrant lighting the incinerator. So they just put it aside and burned it on the ground. It just hangs in the air. That is our own particular problem.

THE CHAIRMAN: We were out there today. It was pretty fair. There was a fire burning.

MR. MUIR: Maybe the winds were offshore. But the prevailing winds are from the west, and it does blow right down on the subdivision.

THE CHAIRMAN: What kind of co-operation do you get when you call the President and tell him he is shooting garbage on your house?

MR. MUIR: Some of the people, especially contractors, were building houses at the plant. They did build an incinerator at great cost. But they do not use it.

THE CHAIRMAN: Why do they not use it?

MR. MUIR: As I say, they may not have enough waste to warrant lighting it.

THE CHAIRMAN: When you call the office, what do they say about it?

MR. MUIR: I think we are sent through a lot of wrong channels, and we never seem to get to the one who is concerned in it.

MR. MORNINGSTAR: I wonder if it would do any good to call the Council or the Clerk?



MR. MUIR: We want to know whether we have any rights, seeing the factory was there long before the subdivision. When the plant was built, it was an industrial area, and there is not much we can do about it.

MR. MORNINGSTAR: When you complained before, when Alderman Auld was on the Council, they did something about it?

ALDERMAN DELANEY: Now the question is to make sure they use the incinerator?

THE CHAIRMAN: Is that your Ward, Alderman Delaney?

ALDERMAN DELANEY: No. The reason I am asking you is because Mr. Muir is associated in this area with business.

THE CHAIRMAN: Are you saying then that the Company is not co-operative with its neighbours in doing something about the problem?

MR. MUIR: I would say no, because when they built the incinerator, we thought it was all over; we had nothing to worry about it.

MR. ELLIOTT: Is this a new building?

MR. MUIR: No, but the incinerator is only about three years old.

MR. THOMAS (Oshawa): Is it a matter of cost?





MR. MUIR: I do not know. There must be something involved in lighting the incinerator.

THE CHAIRMAN: Do you mean to say that they just burn it in an open fire on the ground?

MR. MUIR: Just in an open fire, on the ground. Right before that incinerator was built, we could see the flames well over thirty feet high.

MR. ELLIOTT: I worked in a rubber factory for twenty-four years and they used to take their garbage and burn it out in the yard. But Hamilton stopped that about eleven years ago. Now there has not been a thing burnt in that plant in the city limits for a number of years, and the people there have not had any trouble. One of the dirtiest smokes in the world is rubber smoke.

MR. MUIR: You cannot knock it off. It lights on you; it is just a smudge.

MR. ELLIOTT: It is the worst smoke in the world -- worse than oil.

MR. THOMAS (Oshawa): I think this is a problem which can only be tackled in a spirit of co-operation, between the Council and the people concerned. I do not think any by-law is in existence in the town at the present time, so if you have not any by-law, how can you enforce any kind of regulations? So I



think the Council should try and contact these people to see if they will co-operate and deal with the matter as a problem, until such time as a by-law is introduced, and they are in a position to enforce it, -- with the necessary penalty teeth.

MR. AULD:(M.P.P.): It did occur to me that one of the things which might be done would be to assist municipalities, particularly smaller municipalities, in drawing up a so-called smoke by-law, which, as I understand it, is quite a trick.

I know that when I was in the Council here and we discussed this matter, we came up against the same questions, "What is too much smoke", and "What is too much noise"? To different people, it means different things.

MR. ELLIOTT: It was cleaned up definitely in Hamilton.

MR. AULD, M.P.P.: The question in my mind is, whether the Committee could recommend enabling legislation to the government, if necessary, and a suggested by-law for municipalities, which could be drawn up, and perhaps the government might make available through, say, the Department of Health, the necessary equipment for testing -- which could be quite expensive and would require trained personnel to





operate it. I do not know what the Committee is doing, but I think that in Brockville, this would be a great help; perhaps, also, in the case of Prescott and Gananoque and other communities which do not have large funds available to do that kind of work.

ALDERMAN STOREY: The purpose of this Committee was originally to establish just what Mr. Auld was speaking of, a Bill for smoke control.

THE CHAIRMAN: Mr. Alderman, I think we should just clear up which Committee is being referred to. Are you talking about a local committee, or what committee?

MR. GORDON: I think the local committee of the Council could get by-laws from a number of cities in Ontario.

ALDERMAN STOREY: We have already applied for a typical by-law. Our committee has made application so that we can frame a by-law for our own purposes here, and we could take action in respect to the places concerning which we have complaints from residents.

We have been getting complaints over the years, but did not have any by-law, so we could not take any action. That was the purpose of forming a committee, the particular committee which four of



us are on, and why we were travelling slowly, was the fact that we did not want to frame a Bill which we were not going to be able to enforce, or the cost of enforcing would be beyond the resultant benefits.

That is the action we have been taking to get a typical Bill which we could work with for the benefit of the town and the good of the citizens.

THE CHAIRMAN: The member was talking about the Select Committee, and I would just like to tell him definitely that is being given consideration. We realize that many of the smaller municipalities are not in a position financially to provide a good up-to-date smoke-abatement programme. We know that it costs money; and I know I speak for the other members of the Committee, when I say that one of the things probably that could be included in a report would be the provision for a division of the Department of Health, or a Board or Commission at the provincial level, to which the smaller municipalities could come for technical and scientific advice, and assistance, and possibly financial help.

That is one of the things we are aiming at. We want to encourage municipalities to have a smoke by-law and to get on with the job, and I believe any way that we can help at the provincial level, we want



to do it. That is exactly what you are saying, is it not?

ALDERMAN STOREY: Yes.

THE CHAIRMAN: To get back to Mr. Muir again: who are these ladies who are supporting you?

MR. MUIR: My wife, Mrs. Gilbert, Mrs. Watson; Mrs. Currie, Mr. Fraser and Mr. Currie.

THE CHAIRMAN: We are certainly glad to see the ladies present, because it is a dull looking audience without them.

Coming to the Phillips Electric Company Limited, you feel they are not co-operating with the citizens in the area?

One of the things I would like to say is that the fact they were there thirty years ahead of the taxpayers does not mean a thing. Everybody has to live, and you have to live in co-operation.

MR. MUIR: I heard the amount it cost them to build that incinerator, and it is quite staggering; I feel they have certainly gone out of their way to help us, although the reclaiming of this wire means quite a bit of revenue to them. They could sell it for junk and lose quite a bit of money. But by reclaiming it, it is a big item in their revenue.

But now they just do not use the incinerator





unless they have a large bundle to burn; and these small bundles, which may only burn for two hours, will ruin a Monday afternoon's washing.

THE CHAIRMAN: Have you lodged these complaints of which you are speaking?

MR. MUIR: One by one, through various channels, I think. I meet people on the street who work out there, and they say, "You know how much it costs to build an incinerator", and we "hassle" back and forth.

THE CHAIRMAN: Have you taken it up with your own smoke committee in Brockville?

MR. MUIR: No, sir.

THE CHAIRMAN: Well, how would it be to do that?

MR. MUIR: Well, we mentioned it to Mr. Auld two years ago.

THE CHAIRMAN: But the committee that is operating today; have you discussed it with them?

MR. MUIR: No. My wife says some people in the street have taken it up with them.

THE CHAIRMAN: I think we have found it a pretty good idea for people to take these things up with their local Council members. They know the local situation best of all, and they are all anxious



to serve, and I think if you took it up with Alderman Dye and his group right now, you would probably get something done.

Incidentally, we had Alderman Cunningham with us this afternoon on our tour, and we had a chance to look at all of the places here in Brockville, including yours.

Now, ladies, if you are going to speak, we want you to stand up and give your names.

MRS. GILBERT: Monday morning I went to do the washing, and the smoke was really bad, although fortunately it did not come over our house. Yesterday, it was terrific; you could hardly see for the black smoke. And that is two days in a row. It was good this afternoon.

THE CHAIRMAN: Did you notice it today?

MRS. GILBERT: No, it was very good this afternoon.

MR. AULD, M.P.P.: I think they were burning paper, because whatever they were burning was not very smokey.

MRS. GILBERT: So, having this two days in a row is pretty hard, you know, when you are washing.

MRS. CURRIE: You can't put the washing out when there is this smoke.





MRS. GILBERT: It is really a "mess" when you bring it in again. Also, the odour is very bad at times.

MRS. CURRIE: Back to this smoke committee and so forth: the Phillips plant is the largest employer in this town, I believe. This is what I find this afternoon in trying to round up some people to come to the meeting. We have a number of people who work for the Phillips Company in the neighbourhood. They are right behind us. But they would not come to a meeting of this kind.

There are other plants involved; and after all, it is people's bread and butter. What about the smoke committee? There are members of these firms on the committee, and they are only going to go so far. How would you handle that as far as your Committee is concerned? Some people say, "Why did you build your factory there?", and so forth, but in this town, you cannot build away from smoke, with the river, the factories, and the railway tracks.

MR. ELLIOTT: Are not you women in the majority?

MRS. CURRIE: It wouldn't do much good. As far as the smoke committee is concerned, I feel the people on that committee are connected with these



various firms.

THE CHAIRMAN: Madam, that is pretty much of a local problem, which you will have to work out here in Brockville, and I do not think any members of our Committee would like to become involved in your local situation. I know it is sometimes a rather difficult one, and I can tell you that in many places we have visited, that same condition exists.

We have had railroad men speak their piece; as a matter of fact, we had one chap in Windsor who was employed with the Canadian National Railways as a fireman, and during the course of his remarks he said, "Probably I won't have a job in the morning, but I wanted the Committee to know what I had to say, anyway". So maybe some of the citizens will have to adopt a more fearless attitude and speak their piece, and let the chips fall where they may.

I think, if you discussed that with your own elected representatives, they take an unbiased view of the situation, and probably the present committee would do the job for you. But Mr. Muir said you have not discussed it with them recently. I think you should, do you not?

MR. THOMAS (Oshawa): How was this committee appointed? Who appointed them? How did it come to



have so many representatives from industry on it?

ALDERMAN STOREY: This committee was appointed by the Mayor in open Council as a result of numerous complaints with respect to one particular industry, Dominion Storage, on Water Street. To my knowledge, I do not think there is any effort on the part of any of the men on the committee to act in relation to this. I was myself for a number of years in the employ of the Phillips Company. The reason we have felt unable to select any other industry than the one about which serious complaints were made, is due to the fact we felt if we approached any single industry, we had to be uniform and go ahead and take care of the rest, with a by-law which had teeth in it.

We have quite a problem with Dominion Starch to get them to correct conditions as well as they have, without having a by-law. In fact, in some places, we have almost been refused entrance to the plant, to see what conditions were. So we have had a pretty tough road so far, and until we can get what I hope you are striving to give us, that is, the framework of a by-law which has some teeth in it, we cannot go ahead with the hope of doing effective work.





MR. AULD, M.P.P.: I wonder if I might say, in connection with what Mrs. Currie said, that Alderman Dye, who most of us know as the Manager of the Ault Creamery, the first place he listed for the Committee to visit this afternoon, was the Creamery and he wanted to make sure, according to Alderman Cunningham, that he should take us around and have his own plant visited so it would not be put in a corner and overlooked.

While I am speaking, I might say that as far as the Phillips plant is concerned, I find it hard to understand why, after spending a considerable sum of money on this incinerator, they do not use it, and I cannot help but think that someone down the line has lack of liaison, because I do not think that whoever is in charge of burning the rubbish, is carrying out the wishes of the company. It does not seem reasonable when the company has spent many thousands of dollars to build an incinerator, that they would not use it.

THE CHAIRMAN: Is there anybody here who could speak on that situation?

MR. MUIR: They may have a special apparatus for reclaiming the copper and the ashes. The ash itself, as I understand it, can be put through a



chemical solution and copper obtained from it. Maybe if they burnt the straight rubbish, the apparatus would be fouled up. It is just a thought; I do not know; but maybe the incinerator has been converted also into a reclamation plant, and they cannot just burn everything in it.

MR. THOMAS (Oshawa): I think there may be something in that.

THE CHAIRMAN: I would certainly strongly recommend that your group, Mr. Muir, arrange to meet with the Council Committee on Smoke at an early date and go into this problem, because if anybody can deal with a local industry, it would be your own locally-elected people; and they are well represented here tonight.

I wonder if we can go on and talk about the ship situation.

MR. MUIR: I work for a shipping company, and the smoke problem is very important to us, because, when passing through the Detroit River, <sup>if</sup> we emit smoke for so many minutes, we are fined, and that is all there is to it.

So we have converted one ship from under-fed to over-fed stokers, and we find it is about 90 percent. efficient.





More and more ships passing here are being changed to over-fed stokers, and also oil-fired ships, which do not emit too much smoke. I read a report on it last week. The C.S.L. -- the Canada Steamship Lines -- which has the largest number of ships in Canada, maintain their ships which are now coal-fired are mostly ones which will not last more than another five years, when the seaway goes through, and they are not going to spend \$30,000. to convert their stokers for a five-year period. The ships they intend to use for long-term work are oil-fired diesels, and they are not going to save these old ships.

I think the steamship problem is being handled by a much greater authority than any small community. It is being handled by the Marine Association in Canada, and the Lake Association in the States. So they are being checked on it all the time, and as regards the ships passing through Detroit and Cleveland and so on, they are getting reminders everywhere, and they are doing their very best to clean things up.

It is not only Brockville, it is everywhere they go.

THE CHAIRMAN: How did the Navy handle that situation during the war?



MR. MUIR: They just did not emit smoke; that is all. If they did, you were out of a job, and they have a very nice way of getting you out of a job. I do not know how they did it, but possibly they were told that if they emitted smoke, they had better stop or get blown out of the water.

THE CHAIRMAN: Maybe that was the right attitude to take, just to say "stop".

MR. MUIR: Another problem we have is inexperienced men. A good fireman does not have to make steam for more than a few minutes. The inexperienced man just possibly does not know how to clean fires, and make proper preparation.

THE CHAIRMAN: If we contacted the Navy - -

MR. MUIR: The Navy would know nothing about it -- not now -- because the ships are oil-fired today, and it is the coal-fired ships which are the problem.

If you want to contact anybody, it would be the President of the Marine Club in Toronto, Mr. Rowntree. Mr. Donovan is the Secretary.

THE CHAIRMAN: What is the President's first name?

MR. MUIR: I do not know. Mr. Rowntree is the President of the Marine Association of Canada.



THE CHAIRMAN: What street, do you know?

MR. MUIR: No. I could obtain that information for you tomorrow and let you have it.

THE CHAIRMAN: Would you give it to Mr. Auld, and he can forward it to us?

MR. MUIR: The Committee of the Lake Carriers Association and Marine Association have tried to control it. It is under a Mr. Katz. He is in charge of the smoke control entirely.

THE CHAIRMAN: Is that Dr. Morris Katz of Ottawa?

MR. MUIR: No, I think he is an American.

MR. MURDOCH: It is Dr. Morris Katz.

MR. MUIR: He prepared a report which came out a month ago. It is very interesting reading.

THE CHAIRMAN: You may be interested to know that Mr. Murdoch comes from Windsor; he is the member there. Sometime ago, the smoke pollution officer in Windsor laid a charge against a ship which was at the dock in Windsor, and it went to court, and the company was fined. So a precedent has been set pretty well.

MR. MUIR: Yes: if we have too much smoke, we have the police force on our hands.

We are converting under-fed stokers as fast





as possible, and in a period of five or six years, I think smoke on the lakes will have almost disappeared.

THE CHAIRMAN: What company are you with?

MR. MUIR: Bayswater Shipping.

MR. ELLIOTT: Is one company worse than another?

MR. MUIR: They are all the same. But the coal burners are the worst.

MR. ELLIOTT: The oil burners are no problem?

MR. MUIR: Well, it is globules, oil drip. You cannot see it so much, but it is there.

MR. ELLIOTT: One that is burning overhead oil, I suppose?

MR. MUIR: Yes.

THE CHAIRMAN: Is it not a fact that when this Seaway project is completed, and we start getting the large ocean boats on the route here, the majority of the ships will be fired by diesel oil?

MR. MUIR: Yes.

THE CHAIRMAN: So really the problem will not be increased to any extent?

MR. MUIR: No.

THE CHAIRMAN: It is the local shipping which is still burning coal.



MR. MUIR: The older ships -- that is right, -- from twenty-five to thirty years old. Those are the bad ones.

THE CHAIRMAN: And you say that most of the local ship owners are just sort of hanging on to what they have, waiting for the completion of the Seaway?

MR. MUIR: If we feel that the condition of a ship warrants the expense, that she is going to last a long time, probably we will make the conversion as we can afford it. But the larger companies, such as C.S.L., twenty of their ships are canal size vessels, 250 feet, and when the Seaway goes through, they may be put away. An over-fed stoker costs in the vicinity of \$16,000, and they are not going to spend that much money on a ship which may not be good for another five years.

I think people will have to put up with this for a little while, and in five or six years the trouble will be gone, because deep sea vessels will be coming in. I would say that only about one in twenty is a coal-fired ship. Most of them are oil or diesel.

MR. MORNINGSTAR: It is interesting to listen to Mr. Muir, when he says, in the use of coal



for heating, they get so much smoke sometimes when new personnel is on the job. There is a lot in the way the firing is done.

MR. MUIR: A good fireman can keep his fires under control.

MR. DONOVAN: Where there is control, they are not having that trouble. But where ships pass through an area where there is no control, they do not have to worry about it.

MR. MUIR: In Detroit, or anywhere else, you are allowed to emit smoke for a certain period. You cannot run a steamboat without making smoke; it is impossible; but there is a length of time which is in excess of what is normal, of what can be done, and when you put fresh coal on a fire you are going to get smoke, but that should burn off in ten or fifteen minutes, or probably less. Five minutes should be plenty.

But if you continue to make smoke for a whole afternoon, or even an hour, going down the river, you are a poor fireman. But even in Detroit, you are allowed to make smoke for a certain period.

THE CHAIRMAN: Six minutes in an hour?

MR. MUIR: Six minutes in an hour.

THE CHAIRMAN: Mr. Murdoch knows what you are





talking about, because they always turn the smoke on as they pass his house, and shut it off when they get into Windsor.

MR. MUIR: We will just have to reduce the limit, I guess.

MR. ELLIOTT: Is the prevailing wind mostly driving the smoke this way?

MR. MUIR: Our prevailing winds are west and southwest.

MR. ELLIOTT: In other words, you get the prevailing winds?

MR. MUIR: Yes.

THE CHAIRMAN: I see Mr. "Bob" Statton in the audience. He is the Chief Engineer for the General Hospital. We enjoyed quite an interesting chat with him this afternoon right along the line of what we have been talking about -- complete and incomplete combustion and proper firing, and so on.

I wonder if we could have some comment from Mr. Statton at this time?

MR. STATTON: I do not know upon what to comment. I know regarding the complaints regarding the General Hospital, conditions there could be improved upon. An improvement along the line of control of smoke, has to have some means or method



set up for measuring the density of smoke, and some form of inspection, as I indicated to you this afternoon.

I do not say that is not feasible. It seems to me a logical method of going about controls.

THE CHAIRMAN: Would you just enlarge on that plan as we discussed it, Mr. Statton? We were talking about the problem of enforcement, and I know the Aldermen would be interested in this.

MR. STATTON: In the first place, set up your densities allowable within a certain length of time, and have a recording meter installed, perhaps purchased by the municipality, and rented to the industry.

THE CHAIRMAN: And what would be the price of this, approximately?

MR. STATTON: Oh, roughly \$300, or \$350. They have indicating and recording units now available for \$330. It would seem logical that the municipality, if it is interested, would put it out on a rental basis, or service charge, the same as they do meters, run by the Department of Health, and have some inspector check on it; if you are beyond your limits, have the inspector suggest improvement; and if the users do not abide by them, then fine them. Some



system like that, I think, would work.

Mr. Dye called me on the committee, and I went to a meeting some time ago. It was then suggested there should be some form of control in the town of Brockville. I would like to call on Mr. Court now for his remarks. He is the Chief Engineer of DuPont of Canada, Limited.

THE CHAIRMAN: Just before you call on him, if you would not mind, there might be some questions from the Committee.

One of the big things in any law is the enforcement, and we are all practical enough to know there is no point in passing any law if it is not going to be observed, and if it is not going to be effective. It has to be practical and realistic.

Your suggestion there of putting meters on smoke stacks which could be read every week or two, and if they are not abiding by the rules and regulations, the inspector could say, "This is a poor job; if it does not improve, we are going to prosecute", with both the inspector and the industry in question knowing the rules and regulations, seems a very useful one.

I was also interested in your comments -- and you might just like to talk a little about this --





to the effect that people operating large furnaces can pretty well make them smoke or not make them smoke, according to the way they are operating the lower part of the furnace. Is that not a fact?

MR. STATTON: That is a fact, certainly. Within reasonable limits, you can control your smoke. If a boiler is operating with a reasonable load, you can certainly stay within the normal six-minute period on smoke. When you speak of smoke, you have to classify the smoke as of a certain density. Any fuel is going to create smoke; it depends on the quantity and the density. But what you are going to get is smoke.

If you have a large boiler operating on a very low load, or being forced beyond its limits, you are going to have smoke beyond the limit of the six-minute period which has been recommended.

THE CHAIRMAN: But you say that if the Council of Brockville passed a reasonable smoke by-law, there could be quite a difference in the situation here?

MR. STATTON: There sure could, providing they put out some means of definite indication and proof. If you went around with a Ringelmann apparatus and said, "You are violating the smoke by-law",



personally I do not think it would hold water. If you saw a man coming around the district, it would not be long before you knew who he was, and you would not make any smoke.

THE CHAIRMAN: But with this whole-time indicator, it would be out of your hands?

MR. STATTON: It could be a sealed system. An instrument which could not be tampered with nor changed, or things like that, would certainly provide positive indication and positive proof.

MR. MURDOCH: Do you have any complaints of smoke caused by the hospital?

MR. STATTON: Yes, we do. Not so much in the winter time. We get very, very little in the winter time, because we are up to a fairly good load in the boilers; but in the summer time when we are down to within 25 percent. of the rating of the boilers, the coal gets plugged up, and every time fire is put on it, it will break it up.

MR. MURDOCH: Do you burn different grades of coal in the summer than in the winter? If so, perhaps these different combustion conditions are more or less related to that.

MR. STATTON: You put me "on the spot". The only dealers in the town of Brockville are on the



Board of Governors.

THE CHAIRMAN: Maybe you will have to be one of these "fearless citizens".

MR. STATTON: We do not burn a good grade of coal at any time.

MR. MURDOCH: But my question is, do you burn a different kind of coal in the summer than you burn in the winter?

MR. STATTON: . It is poor in the winter and poorer in the summer. I admit a poor grade of coal gives you more smoke. With a good grade of coal, the boiler should carry the smoke for which it is designed.

MR. MURDOCH: Do the coal companies send out engineers to check furnaces to see if they are giving proper combustion?

MR. STATTON: It has been done three or four times in my plant, and they forwarded recommendations to both coal companies to supply the coal, but they still do not supply the coal which I recommended. So what am I to do?

THE CHAIRMAN: And you did say that if you burn the type of coal you recommend should be burned, you could greatly reduce the emissions of smoke and soot and dust from your chimneys? Right?





MR. STATTON: That is right.

THE CHAIRMAN: Mr. Jarvie, would you like to say something?

MR. JARVIE: Not at the present time.

MR. MURDOCH: If you want something done about the selecting of the right kind of coal, we may be able to fix that. What type of coal do you use at the hospital?

MR. JARVIE: Black coal, bituminous coal, three-quarter inch nut. We do not have a great deal of trouble with coal. I understand some of it is the best grade of coal. We send it up to the provincial laboratory and specimens are analyzed.

THE CHAIRMAN: You will have to thank Mr. Auld for that.

MR. JARVIE: I think it has been done before.

THE CHAIRMAN: Are you getting any complaints from the citizens in your district?

MR. JARVIE: No. We are out in the country. You did not go to the hospital, did you?

THE CHAIRMAN: No, we did not.

MR. JARVIE: We are just east of the General milk plant. We did have a little trouble at the beginning of this week. The temperature dropped on Saturday from 32



to 20 degrees above zero Saturday morning. I had only one boiler. I normally have two, but we try to carry on with one boiler, hoping the weather will change. It is poor economy to operate two boilers with 50, when you can operate one with 100.

On Monday and Tuesday of this week we did have quite a bit of smoke emission. Ultimately, I had to call for two boilers, because I could not get the steam up with one. We have 1400 patients and you cannot take a chance with 1400 people living in all the time: if anything had happened to one boiler, we would have had trouble, and it is our business to be careful.

In the spring and fall, we have difficulties; for illustration, the nurses' residence. The heat is on only four hours a day, and most people are careless, they do not shut off their radiators when they open a window, so we shut off periodically and we get in wrong all the time.

THE CHAIRMAN: Would you like to answer this question? In the course of our studies, in speaking with some experts on firing and what-not, they told us that by experience and proper air-pollution and smoke-control equipment, they can save the cost of that equipment in the cost of fuel, and



that in many cases there is money actually going up the chimney.

MR. JARVIE: Correct.

THE CHAIRMAN: It is said that you are a good engineer, and you are the right racial origin. What about that money consideration?

MR. JARVIE: That is definitely correct. To give an illustration: this one boiler I had on on Monday and Tuesday of this week was operating much too high, was emitting far too much smoke. Definitely, with some boilers, it is pretty hard to eliminate smoke at any time, but you can do it if you have the proper equipment.

THE CHAIRMAN: Thank you very much for that statement, because it does back up what we have already heard many times before.

Could we hear from the other gentleman?

MR. COURTNEY: Mr. Chairman, members of the Committee, ladies and gentlemen; I have not much to add to what Mr. Jarvie and Mr. Stratton have said, except that I think I can bring some help to the Brockville Smoke Abatement Committee through the Institute of Power Engineers.

The Institute has, I believe, in all of the cities of Ontario where there are smoke pollution





laws. I happen to know the Smoke Abatement Officer in Windsor, Mr. Boyle, and he mentioned to me about a month ago how happy they were in "soaking" this steamship company which was getting away with black smoke. We do among our members stress the necessity for clean smoke stacks.

One reason is from the public relations angle. Another is that you save money.

When you are burning coal, carbon monoxide, where you get black smoke, you are only using 4000 b.t.u.'s, only getting that much value. If you burn complete combustion, you are getting 14,000. So in most plants it is very easy to "sell" the people in charge of the powerhouse and also the management, on the idea of putting in proper fire equipment, when they are going to get three times as much value for their fuel.

THE CHAIRMAN: Mr. Courtney, would you just repeat that 4,000 and 14,000 figure?

MR. COURTNEY: Yes, the average pound of coal contains from 13,000 to 14,000 b.t.u.'s. That is the value of it. If you burn that to carbon dioxide, which is perfect combustion, each pound of coal in your boiler will release 14,000 b.t.u.'s.

If you burn it only as carbon monoxide,



and you get black smoke, you are only getting 4,000 b.t.u.'s; there are 10,000 b.t.u.'s of fuel going up the smoke stack.

Our biggest help in smoke abatement is when you talk "dollars and cents" to companies; they will listen to you a great deal more than if you are just talking "public relations".

We have offered our services to Mr. John Dye and his committee, and we will continue to do so in the future; and we have members in Prescott. In fact, our president for this year is here.

I am sure Mr. Ranson of Prescott is thinking of a smoke-abatement law, and any of our members from Prescott will be very glad to assist him with it.

Our head office has a great deal of literature and data on this smoke pollution problem. I think it is probably the same data which your Committee has.

THE CHAIRMAN: Mr. Courtney, would you care to comment on the present provincial law as applied to smoke and air pollution, and as to its effectiveness and so on?

MR. COURTNEY: I know in the city of Windsor, they have been working on that for three or four years, or longer, and if they are finally able



to enforce that law, Windsor will be a better place in which to live.

I believe Sarnia has a good start on the same thing. From the comments I have heard, I believe they have done a certain amount in industry in Sarnia from the dollar-saving angle, more by way of educating the people than by penalizing them.

I think probably some of the plants which burn coal in Brockville could be educated to put in some better equipment, such as stokers.

Mr. Muir mentioned that on the lake boats, the under-fed stokers did a lot better job than hand-fired. I think there are a lot of hand-fired around Brockville, where it would pay companies to put in stokers or shift to oil; it would be money in their pockets, as well as making the citizens of Brockville happy.

THE CHAIRMAN: As an engineer, do you think excessive smoke from a coal-burning locomotive is necessary?

MR. COURTNEY: No, I do not. But I am not a railroad man, so that is just my opinion. I have nothing to back it up.

ALDERMAN STOREY: We have an Alderman, Mr. Kelly, who is a C.N.R. railroad engineer, who





emphasizes the fact that he is a diesel engineer, and quite competent, and he has on occasion said it is possible definitely to control the smoke from a coal-burning locomotive, and not experience black smoke, by proper firing. He has made that statement in Council.

THE CHAIRMAN: We were up around the yards this afternoon, and I do not think the Committee was too much impressed with the look of the railroad yard. We can well understand that you folks have a railroad problem here.

As a matter of fact, I think at the top of the list in every Ontario centre, we have visited, they talk about smoke from the railroads. It is quite a problem, because, as you folks maybe realize, the railroads operate under an Order dated 1908, and it is a Federal Order, and it has not been changed or amended since 1908.

This Committee has met with the Hon. Mr. Marler, the Minister of Transport; we have met with the Board of Transport Commissioners; we talked last week with the Hon. Paul Martin, the Minister of Health and Welfare, and also with his Chief of Air Pollution, Dr. Morris Katz.

Later in the month, the Committee is going



to meet in Montreal with the President of the Canadian National Railway and the President of the Canadian Pacific Railway, and we think that through that, we are going to be able to come up with some co-operative suggestions and recommendations insofar as the railroads are concerned.

They are certainly offending at the present time; there is no question about it.

You might be interest in learning that one of the things the Committee has thought about in connection with the railroads is this; it seems that in the large urban areas of our province, all the old coal-burners are located -- in downtown Windsor, Hamilton, Toronto, Sudbury and so on, and all these nice, modern diesels or the majority of them, are running along the north shore of Lake Superior, where it really does not matter about smoke.

We asked one of the men at the roundhouse today for his comments on that: did he think it was practical or why were the railroads operating that way; and he said he did not know, but he did know that the scheme of things for complete dieselization was to start at the outskirts of the province and work in to the large centers. This would naturally put Toronto right at the bottom of the list; and it



is right at the bottom of the list today, there is no question about it.

So these are some of the things we are going to discuss with the heads of the railroads, and we feel we can get their co-operation in this all-inclusive programme on which we are working.

Doctor Evis has just reminded me that we have already, in co-operation with the Federal people, revised and re-written this 1908 Order in such a way as to bring it up to date, and to make it more effective.

We discussed it last week in Ottawa.

Quite frankly, ladies and gentlemen, I do not think we have left a stone unturned in delving into this problem. Certainly we have learned quite a bit here tonight.

Did you have something you wanted to say, Mr. Stratton?

MR. STRATTON: What about diesel soot? What control is there going to be put on that? That is one of our biggest offenders in the General Hospital set-up, the diesel oil. The railroads stop their engines there for switching and so on, and the diesel soot comes over, and we have complained of that diesel oil soot on several occasions.





THE CHAIRMAN: I can tell you this, Mr. Stratton. In the first place, at least to date, diesel locomotives are not nearly as offensive as the coal-burning locomotives to the general public. I can think of a visit we made to Philadelphia, which is a very large railroad centre -- and they have twenty-two different railroads running into downtown Philadelphia.

Several years ago, when they first set up their smoke abatement programme, they were getting about forty or fifty complaints a day regarding smoke from railroad engines. Now, they have all converted to diesels, and we asked the smoke abatement officer about the complaints at present, and he said they were two or three a month, that is, they have diminished from forty or fifty a day, to two or three a month.

So, generally speaking, it is a move in the right direction. However, incomplete combustion in poorly operated diesels can cause emissions in the same way as coal burners do.

You notice your big diesel trucks along the highway; some are not shooting off anything, while with some you can see the black smoke a mile away, because they are not operating properly.



The fumes from diesel engines contain many toxic pollutants, too. Most of them are harmful to health. I believe, when we have tackled the problem of dirt and smoke and fly-ash, and have that cleaned up, the next thing will be to do something about diesels.

The more we have gone into this study, the more we find it is an unending one. When you eliminate one problem, you automatically move into another one. But for the present time, I think the No. 1 problem is the dirty one from smoke and fly-ash and soot, rather than diesels.

However, there is no question but that in time we are going to have a diesel problem.

We have given some attention to the matter of exhaust on diesels and/or oil-burning furnaces and automobiles, and we visited the Research Centre at Wayne, in Pennsylvania, where they are working on catalytic mufflers. They seem to be making good progress, and hope that probably by 1958 they will have something practical and economical, especially for automobiles, because automobiles exhaust is detrimental to health.

Also, we are investigating that and getting reports from them concerning progress all the time, so



probably in 1958, they will have something which will be practical and not too expensive.

I think perhaps the recommendation of the Committee will be to make these attachments mandatory on automobiles, insofar as they are available and practical, as to price and the rest.

I might say that the three largest manufacturers of automobiles -- Ford, Chevrolet and Chrysler -- are spending millions of dollars on research to get some gadget which will eliminate the exhaust fumes, and from what we were able to see, particularly in Los Angeles and Philadelphia, they are getting mighty close to a solution. They are talking in terms of \$10. or \$15. per car.

DOCTOR EVIS (Secretary): As a matter of fact, as far as automobiles are concerned, there is a hope that the catalytic exhaust muffler will produce enough heat so you can dispense with the ordinary heater in a car, which costs -- what? \$25.00 or something like that. So you will be able to put a muffler on for, say, \$25.00, and do away with the heater. So actually you will get a purer exhaust and save money at the same time.

MR. AULD, M.P.P.: I wonder if I could ask Doctor Evis a question? It seems to me I read





somewhere that many of the various additives put in gasoline these days, have a tendency to make the exhaust more toxic; they add new elements in the exhaust.

DOCTOR EVIS (Secretary): That is true. Anything which you do to gasoline, apparently, to increase its power, makes the exhaust worse. That started away back in 1946 to 1948, when they began the catalytic cracking of the crude oil, and it produced double bond hydrocarbons, which break up easily, and apparently are cancer-forming.

And other additives -- for instance, lead -- have bad effects. One trouble with lead is it fills up the catalyst and catalytic exhaust and makes the thing operate efficiently for only perhaps five or eight thousand miles. They are now trying to get one which will not be ruined by gasoline, and which will operate efficiently for, say, twenty thousand miles, and you would have to change it only once in the lifetime of a car, or something like that.

But the additives are detrimental to the quality of the exhaust.

THE CHAIRMAN: Thank you, Doctor. These are things which are beyond the experimental



stage. They are almost a reality.

MR. THOMAS (Oshawa): I may say that engineers estimate, that <sup>of</sup> every gallon of gasoline which goes into an automobile, only 90 percent. is used; 8 to 10 percent. is going out the exhaust. Percentagewise, it may be true of the diesel engine, although it could be a lower or higher percentage; I do not know. But these are some of the things they are working on. at the present time.

You can imagine, if 10 percent. of the gasoline is going out through the exhaust in the form of gas, there is a tremendous increase of gas on the highways today, and what a problem we are likely to have in the future. That is the problem which is, I think, 50 percent. responsible for the situation in California; in Los Angeles, particularly, where the Committee visited.

THE CHAIRMAN: Thank you.

Are there any other people who would like to comment on the local situation?

MR. SUTHERLAND: We have had quite a bit of discussion on our problem. We have a problem, and I think you know we have, and I have the question in my mind of what the effect of the work of your group will be upon that problem.



You are dealing with this subject on a province-wide basis. We are a town. In other words, how can what you find affect the particular problems we have here?

MR. MURDOCH: I think it might be well to more or less clarify the position of this Committee a little further.

The province of Ontario for many years has had a smoke control and air pollution legislation, which has been adopted by many cities where the Councils have felt they have had a nuisance, and where these Councils have recognized their responsibilities.

However, that legislation was not entirely effective because it exempted certain industries -- brickyards, cement yards, foundries, and a few other industries -- from that legislation.

Some of the members of the Legislature brought to the attention of the House that in their areas, people were suffering from these exempted industries, and that legislation should be brought up to date. So the Committee was appointed.

Actually, I believe one of the things this Committee is doing, is making the citizens and the Councils in our municipalities conscious of the





fact that this is a problem which is growing with our increase in population, and also with the concentration of industry and new manufacturing processes.

However, I would say, for you, right here, it would be possible right now for the Brockville Council to pass some type of legislation which would probably do one thing, if nothing else, and that is control open burning fires, outdoor fires, as it were.

There is a definite fire hazard in any municipality where outdoor or open fires are allowed; and, of course, the only problem we have had brought to our attention by the citizens of this town, as I see it, is open burning, which could be solved by the passing of a by-law almost by the way.

THE CHAIRMAN: Thank you very much.

Just to enlarge on that, one of the things which the Committee will probably recommend to the Ontario Legislature is the setting up of a new Division, or a special Board, an Air Pollution Board, at the provincial level, to which local municipalities could go with their problems -- technical, scientific and possibly financial -- and we will back that up.



In addition to that, we hope legislation will be passed which will provide some control which can be passed on to local Councils, over coal-burning locomotives, and ships; and in addition to that, we are hoping to do something about the exhaust fumes from automobiles and from diesel trucks and diesel locomotives.

So this Committee, in their final recommendations, will be facing new legislation, stronger legislation, more effective, practical legislation, by which the local municipalities can operate in the smoke pollution control field.

Does that answer some of your questions?

MR. SUTHERLAND: Yes. You are dealing with the automobile end of it; I was wondering about the coal-burning factories. We have a similar problem which affects the railroads.

THE CHAIRMAN: That is a big problem.

MR. SUTHERLAND: Is that one of your problems?

THE CHAIRMAN: Yes.

MR. SUTHERLAND: Is there any legislation which can be used to stifle part of the problems with which we are dealing in Brockville?

THE CHAIRMAN: No; they are working on the



Federal Order of 1908.

MR. SUTHERLAND: How does the solving of that --

THE CHAIRMAN: How long have you been here?

MR. SUTHERLAND: About four years.

THE CHAIRMAN: Did you come in a short time ago?

MR. SUTHERLAND: No, I was in at the first.

THE CHAIRMAN: Go ahead.

MR. SUTHERLAND: What length of time are we dealing with as far as our major problems are concerned? Is it two or three years? Do we intend to wait for this? I know that within our own group, the Council of Brockville should solve our own particular problems. But I was wondering what you could do to help us with it, or are you just dealing in the main with railroads, cars, and your large coal-burning industries? What sort of backing do you provide, or do you intend to provide, as far as the smaller~~y~~ problems are concerned?

THE CHAIRMAN: We hope to be able to provide backing for all of your problems.

MR. GORDON: I think, in answer to that, the present legislation provides that the city of Brockville can pass a By-law which will take care of





the whole situation here. There are some exemptions, as you know, at the present time, with which the next Session of the Legislature will deal. But under present conditions, in Brockville, apart from the railways, the City Council can take care of them by passing a by-law, and then they can enforce that by-law, and these industries can be made to abide by the by-law which they pass. Is that not right?

MR. DONOVAN: I was going to ask something in connection with which Mr. Sutherland has spoken.

Since the appointment of this Committee, which was in 1955 -- ?

THE CHAIRMAN: September, 1955.

MR. DONOVAN: -- how far have you gone? Are you nearing the end, or are you halfway through, or do you think you finally have enough to present for a provincial enactment which will make control compulsory, and not have it left at the local level to enact its own by-laws?

THE CHAIRMAN: Mr. Alderman, let me ask you a question. Do you think it would be good business on the part of the province to make it compulsory on local municipalities that they pass local by-laws on smoke?



MR. DONOVAN: Yes, I do. I think when we get to that level, we will really clear up a lot of obstacles.

THE CHAIRMAN: That is a very interesting comment, from you, sir.

How about you Aldermen? I would like you to comment on that.

MR. STOREY: One of the problems we look at is how we are going to convict the offenders. The appearance of smoke at a particular time at a particular residence or industry could be outside the limits of the by-law. I think what Mr. Sutherland has in mind is the particular case of the Dominion Storage here, which was a repetitive offender.

It so happens that, in order to get the necessary information to convict that offender, we had a photographer work a couple of weeks out there, to catch a picture of the pollution at the proper time. In other words, with the existing Act, as I understand it, and as we were informed by the hon. A. J. Stewart, our solicitor, it is very doubtful if we could go ahead and prosecute Dominion Storage with the existing law as it stands in the province of Ontario.

It is all right to say that a certain chimney



is belching smoke outside the area of the smoke density allowed in the by-law, but you have to have proof; you have to measure. Is that right?

THE CHAIRMAN: That is right.

MR. STOREY: And we are not aware of any means of measuring it. In other words, we would have to have some smoke-measuring equipment which we could attach to the chimney of the offender, and take a record at a particular time. That is what we are looking for, -- some assistance in some way, shape or form, so that when we pass a by-law, we can be consistent.

We could not go out and penalize one industry on the information of a few residents in a particular area, when there could be another chimney, belching the same amount of smoke, which would go unpenalized. We would be in serious trouble.

THE CHAIRMAN: Alderman, you are absolutely right. Equipment for measuring smoke content is available at reasonable prices. You can buy the right type of equipment to measure smoke at a reasonable price; and I think everyone will realize, and I am sure the local Council will realize, first of all, that any effective smoke abatement by-law is going to cost money, and it just will not operate





unless it does cost you money.

So I think, if the Council has a problem, and the citizens are agitated enough about it, they can lay aside a portion of the taxes which are collected, for a good smoke abatement programme. That is all there is to it.

But if the people in the local area are not concerned about it, and they do not want to participate in a smoke control programme, I doubt very much, Alderman Delaney, the wisdom of the provincial government saying, "You have to do this or that". Anyway, that is something else again.

MR. GORDON: You have a police force to enforce your laws now, and if a smoke abatement by-law was passed in this town, you would have to have someone to enforce it. You could not do anything with the citizens complaining; you would have to follow up these complaints and see if they were bona fide, and have an inspector or someone appointed by the Council to do that for you. Then you could prosecute.

MR. MURDOCH: May I point out that, if a by-law is passed by the municipality, from the existing legislation, as has been done in many towns and cities in Ontario, the first thing which is



necessary to enforce it is the appointment of an officer. He can be a part-time officer; in a small municipality he could have another position; he might have the job of fire chief for the time being or building inspector. But with a little publicity, the citizens would know the one person to contact if they had complaints, rather than to call on various Council members.

The next step, which I think is taken in some cities, is that when citizens complain of a particular party, the offending industry is telephoned and it is pointed out that a complaint has been made, so they are conscious of the fact. If another complaint comes in against the offender to the inspector, perhaps plus another person so they have evidence which is supported by two persons; -of course, a check is made -- and if there is offence, then they are haled into court; and many convictions have been obtained.

But I would like to point out that the whole idea is that, when an industry knows that a Town Council is serious, and has adopted these certain measures, they begin to co-operate to the point where there are not too many convictions. They just do not allow it to go that far.



MR. JARVIE: What type of equipment would the inspector use?

DOCTOR EVIS (Secretary): Some of them are using smoke stacks now, which is a little more scientific.

MR. JARVIE: Is that more expensive?

THE CHAIRMAN: \$50.00.

MR. MORNINGSTAR: I think another point is, that where you have these by-laws or this legislation, when a new industry comes in, they know you have these by-laws, they realize there are regulations, and they are going to put in the necessary equipment. It is going to cost them a lot of money to do it, but having put it in, they feel they are properly established.

MR. ERIC MONK: I understand you have been in Cornwall?

THE CHAIRMAN: This Committee has not been in Cornwall.

MR. MONK: When you get to Cornwall, you will likely get a big story.

THE CHAIRMAN: We are going there tomorrow.

MR. MONK: And it will be along the lines of how much legislation there is, and how far you can go. They did not get anywhere. It cost them





about \$20,000 and they didn't get anywhere to enforce the present law.

MR. DELANEY: We are advised by our Council solicitor that, on his interpretation of the Act as it stands, at the present time we could not go ahead and prosecute.

In conversation with Mr. Dye on Monday night, he expects that the committee will recommend to the Council that sufficient funds be set aside to provide the necessary equipment and establish the necessary machinery and frame a by-law which, as I mentioned before, we hope will be better than the one we now have, for smoke abatement.

But, concerning forming a committee in either March or April of this year, we honestly didn't have any money set aside. We sought to accumulate all the knowledge and information we possibly could, and at one particular time we were all ready to go ahead and attempt to penalize one industry here, but we were advised by our solicitor against it; and he is the one, of course, to whom we go for advice. That was his interpretation.

MR. STATTON: Could there not be a provincial law set up to control this smoke through all municipalities; and if a municipality wanted to



go beyond that, all right.

In that way, you would be controlling not only the municipalities, but any smoke; you would be controlling those industries in smaller communities where they cannot afford to have by-laws enforced.

Could it not be on the provincial level, and have provincial inspection?

THE CHAIRMAN: That is something which could be considered. In other words, have an over-all provincial law, supplemented by municipal laws? Is that what you mean?

MR. STATTON: You have a municipal speed law through any communities in the province, of 30 miles an hour. It is enforced by the local police force. Where they do not have a local police force, it is enforced by the provincial authority.

MR. MURDOCH: May I point out that the Committee realizes that something has to be done beyond the bounds of the municipalities, by the province, because we are running into conditions where a large industry may be out in a township, and although they are not bothering anybody out in the township, they are damaging the people in



the town, in which case those people could not do anything very effectively by going to the township Council.

So we recognize there is an over-all matter to be considered in these small communities.

MR. STOREY: Has the Committee and the Chairman the idea of taking back to the Legislature something which will recommend a mandatory programme of air pollution control?

THE CHAIRMAN: Not necessarily.

MR. STOREY: Then what is it going to do, which will assist the lower level -- the municipal level -- in having the best by-law which will stand up and will not be broken down because of the fact there is nothing on the provincial level which guarantees that it will be upheld -- such as there is in the Criminal Code?

THE CHAIRMAN: I mean, we have not decided on anything as yet.

MR. STOREY: Is this Committee working on something then, to take something to the provincial House?

THE CHAIRMAN: Our duty was to study the matter of air pollution and smoke control in the province, and then make recommendations and report





to the Legislature.

We are in the course of our studies. I cannot say whether the Committee will say it is to be mandatory or to be permissive. I do not know what the Committee will do when we make our final report.

MR. ELLIOTT: I am just going to explain how they handle the situation in my home town.

THE CHAIRMAN: Which is your home town, Mr. member?

MR. ELLIOTT: Hamilton, Ontario. It is a very big steel town, and a big manufacturing town. We have no less than 454 manufacturing plants in the town, some of them being the biggest in the country.

This Committee was set up consisting of twelve people, and they represent industry, labour, women's organizations, and so on, and they sit around a table and appoint their own chairman, and then they become a governing body on their own.

The came and asked for a smoke abatement officer and the Council provided the funds to the committee to handle the financing of the smoke abatement officer, staff and supplies needed on the job.



This committee is set up separately in the city; it is a cross-section of the citizens of the whole city, and it is working very, very well.

Sometimes we find in the municipality that our schools, churches, hospitals, and public buildings like Federal buildings or probably like provincial buildings, are some of the worst offenders, and the committee has the power and authority to go in and make these people do certain things; and they have done it.

In my home town, they have trained them to the point where they are receiving less than 5 percent. of the complaints they did two years ago.

The only way in which I think it can work in this municipality or any other municipality is to have a cross-section of the people on a committee to handle the job in the way they want, for themselves. For instance, you have a cross-section of your people here tonight. Some of them should be on a like committee to give study to these problems, and get your Council to appropriate funds to handle the job in the way in which you want it done.

I think that is the fair and only way to do it, in order that everybody will be satisfied.



I think the Council will listen to these problems.

We find it costs about 8 cents a person in Hamilton, to run the smoke abatement department.

You can probably "sell" that idea and clean up your city, and be a lot happier.

MR. STOREY: The report of this Committee you represent, Mr. Chairman, could result in the fact that your study has developed a certain seriousness through the province which will result in remedial action being either mandatory, through the province, or it could be left to the municipality to carry on its own programme.

THE CHAIRMAN: That is right.

MR. CURRIE: I am wondering about the enforcement of this by-law. There is one device called a smoke-scope, and another which has a device to measure smoke density. Would the smoke-scope measure a certain level above which they could not go, or would you have to instal a device for measuring density of smoke on the light illumination type system? How is it done? How do you set your maximum level?

DOCTOR EVIS (Secretary): The cheapest thing, of course, is the Ringelmann Chart, with men trained to use it. Many municipalities use





it, and get convictions when they go to court on the evidence of one qualified inspector; and that is a very cheap method.

The smoke-scope is perhaps a little more accurate and scientific; and that is another thing which the inspector takes out in the field and, without warning the industry, measures its smoke in the light of the time of emission, and that is good evidence in court, and they have obtained convictions on that at all times.

These other devices installed from the chimney are put in there by the industry for its own protection, and some of them will ring a bell or blow a whistle, or practically anything you want. Some of them turn that automatic over-fire air jet to cut the smoke down by increasing the combustion, and they are installed by a company. I understand the engineer from the hospital suggested that such a device be made compulsory for the companies, so there is a continuous record on a solid instrument which the inspector could go and move, for example, every week. There would be a written chart of what the smoke emission of a particular company had been during the week.

THE CHAIRMAN: Does that answer your question?



MR:CURRIE: Is the smoke-scope a visual device? And would that type of thing hold up in court?

DOCTOR EVIS (Secretary): Oh yes.

THE CHAIRMAN: I have a catalogue of pieces of equipment and they would all hold up in court.

MR. MURDOCH: The man who goes to court must be an experienced man, to convince the magistrate that he knows what he is talking about.

MR. MORNINGSTAR: There have been convictions obtained for flouting the by-law. Still, the solicitor of Brockville says this cannot be done, that the City Council has no authority to pass this legislation, or if they have, it will not hold water.

DOCTOR EVIS (Secretary): Perhaps the solicitor was referring, for example, to the Foundry. In that case, he might say, "Don't go to court". But in many of your cases here, you could go to court and obtain convictions, if you wished.

MR. MUIR: The instruments are for measuring smoke in daylight hours, but what about the smoke we have, when they are burning at night in an open fire? There is no instrument which could be put on that.



DOCTOR EVIS (Secretary): All open fires should be banned completely, period, day and night, that is the only solution.

THE CHAIRMAN: Perhaps in the course of your remarks, you could advise us what steps could be taken against an offender who burns at night?

MR. JARVIE: That is very difficult. May I first mention that I happened to be at the meeting with the Alderman when Mr. Stewart said that you could not get a conviction. I think he meant you could not get a conviction because some householder was complaining of a nuisance in that particular area.

DOCTOR EVIS (Secretary): You might have to have a qualified officer to give evidence.

MR. JARVIE: To get a conviction at night time, I really do not know what you could use.

MR. GORDON: Is it not true that at night time, some of the engineers blow their flues, and that is where the dust and soot comes from? They do not do it in the daytime, but at night time, when nobody can see it.

At the hotel in Peterborough this morning, our car was just covered with soot and dirt, and that was due to someone burning at night.





MR. JARVIE: Not necessarily, but there is a lot of dirty work done at night. There are some people in town to whom I was talking today who were complaining about things at the hospital; they said they wished somebody would go down and request them not to blow their soot blowers in the daytime. It seems to precipitate over two sections of the town, and you have to be very careful. It does not give the women in that area much chance during the four-hour period.

MR. GORDON: That is just as bad as if you threw your garbage into your neighbour's backyard.

MR. JARVIE: Yes, but you have no way to get rid of fly-ash and soot.

MR. STATTON: If you are allowed six minutes in the hour for a certain density of smoke, how are you going to get rid of this fly-ash and soot?

THE CHAIRMAN: Mr. Stratton, would you just enlarge on that, -- taking care of that night situation with that instrument you mentioned?

MR. STATTON: We blow at six o'clock in the morning and six o'clock at night. I do not know what soot is left in the backyard; I have never been there to see. I honestly do not know



how much soot is coming out of that stack.

MR. MURDOCH: Suppose these ladies took their vacuum cleaners and made a well organized movement and decided to accumulate in these vacuum cleaners, the soot on their porches, and collected about a 100-pound sack, and then walked into the hospital and dumped it on the floor, and said, "This is yours; we don't know for sure whether you want it or not, but we don't want it".

MR. STOREY: In order for us to frame a by-law here, we have to agree and decide on some means of measuring smoke, whether it be Mr. Stratton's recording meter, a smoke-scope, or whatever it be; in order that there would be a certain range, a certain permissible limit, and beyond that they would be penalized.

Coupled with that, there has to be someone responsible, a smoke abatement officer. Those are the three essentials: first, a law; then the equipment; and then the means of enforcement.

THE CHAIRMAN: And the final one is money; and you are arranging for that.

MR. STOREY: Well, we recommended it for next year.

MR. MUIR: Some large fires are allowed



to be left unattended. One is right by the incinerator.

MR. DONOVAN: It has been suggested by Alderman Storey that we have a by-law not permitting fires. If no open fire is permitted, no permission can be granted without a man to attend it. I think the fire department could permit an open fire under certain conditions.

THE CHAIRMAN: Under their supervision?

MR. DONOVAN: Under their supervision. Such as a grass fire.

MR. STATTON: When we burn in an open fire once a year, we do have a couple of firemen in attendance.

MR. H. FRASER: We have not spoken of that odour we get up there. It is a kind of formaldehyde smell. I notice on the snow in the winter time, small spots, probably about one-eighth of an inch in size, yellowish brown. That is not soot, I do not believe. I think it might be a condensation of whatever is going into the air from the solution they use, a formaldehyde mixture. It is a bakelite smell, probably. Is that detrimental to health, Doctor, or do you know?

DOCTOR EVIS (Secretary): It is hard to say





"Yes" on that description.

Is this from an open fire, again?

MR. FRASER: No; it is another problem from Phillips.

DOCTOR EVIS (Secretary): It is really impossible to say whether it is detrimental to health, just from your description. We would have to have it analyzed.

MR. FRASER: It has a very strong odour, and it is present all the time, particularly when the wind blows in our direction. We are used to it, but visitors coming into our district ask what it is.

DOCTOR EVIS (Secretary): The actual formaldehyde odour is very unpleasant, and if it is very concentrated, it is detrimental to health.

MR. FRASER: Whether it is detrimental or not, I do not know.

DOCTOR EVIS (Secretary): I am afraid there would have to be some research on that to discover what it is. If we knew what the substance was, we could tell you whether it was detrimental.

THE CHAIRMAN: Could Mr. Fraser get a sample of that and send it in to our Health Department,



and then they could tell him.

DOCTOR EVIS (Secretary): He might get his medical officer here to get a sample and submit it to the Christie Street Laboratory.

MR. FRASER: It would be diluted with water, because it comes off the top of the snow.

THE CHAIRMAN: Perhaps you could work with the Medical Officer of Health and get a sample of the snow. He could send it to our Department of Health and inform you whether it is detrimental or not.

MR. MORNINGSTAR: Or he could work through his medical officer here.

THE CHAIRMAN: Was there anything more?

MR. FRASER: Really, I should not kick too much about the smoke, because actually it is a good thing. I make my living from it. I happen to be in charge of equipment at the Bell Telephone, and that is to see that people do not have trouble with respect to switching to dial. Today, I had four, all through dust and soot, in that plant, in our switching equipment. So perhaps I would not be working if it was not for that.

THE CHAIRMAN: Is there anyone else in the room who would like to say a word on this problem?



If not, on behalf of the Committee and on behalf of your good member, "Jimmy" Auld, I would like to thank all the people for coming out tonight.

We have had many suggestions and ideas, and I think we have had a little bit of fun, too, and that all makes it very pleasant.

I would like to thank the two Aldermen, -- and they have been 'put on the pan' -- Alderman Storey and Alderman Delaney. I think they were top-notch to stay all evening and answer so many questions. It shows their interest in their jobs. Certainly, with two such Aldermen, and a smoke committee, I know you are going to get some place.

I think Alderman Cunningham who represents a ward, is right on the job too.

Mr. Muir's comments about ships will, I know, be given very serious consideration by the Committee.

I am very pleased that the Mayor of Prescott (Mr. Ranson) came over here tonight, to assist us. We will be driving down through there, Mr. Mayor, in the morning, and perhaps we can have a quick look at your situation.





So, if there is nothing else, we are going to adjourn the meeting, and thank you very much for your help and assistance.

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---Whereupon the further proceedings of this Committee adjourned until Thursday, November 15th, to reconvene in the city of Cornwall, Ontario.

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ONTARIO

P R O C E E D I N G S

of the

SELECT COMMITTEE APPOINTED BY THE ONTARIO LEGISLATURE  
TO ENQUIRE INTO CERTAIN MATTERS AND LEGISLATION  
REGARDING SMOKE CONTROL AND AIR POLLUTION IN ONTARIO.

Mr. A. H. Cowling, Chairman.

Dr. F. A. Evis, Secretary.

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VOLUME XLI

Thursday, November 15th, 1956,

CORNWALL, Ont.

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R. C. Sturgeon,  
Official Reporter,  
Parliament Buildings,  
Toronto, Ontario.

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F O R T Y - F I R S T     D A Y

Cornwall, Ontario,  
Thursday, November 15th, 1956.

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The further proceedings of this Committee  
reconvened pursuant to adjournment.

Mr. A. H. Cowling, Chairman,  
Presiding.

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PRESENT:

Messrs. Elliott,  
Morningstar,  
Murdoch,  
Gordon,  
Thomas (Oshawa),  
Dr. F. A. Evis, Secretary.

APPEARANCES:

Mr. H..E. Mason,	Manager, Howard Smith Paper Mill, Cornwall.
Mr. Adams,	City Engineer, Cornwall.
Dr. T. Tomlinson,	Research Director, Howard Smith Paper Mill, Cornwall.



Mr. C. L. Thompson,	Superintendent, Pulp Mill, Howard Smith Paper Company.
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Mr. Hugh Banfill,	Technical Control, Superintendent, Pulp Mill, Howard Smith Paper Company.
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---The following proceedings were had at the  
plant of the Howard Smith Paper Mill, Cornwall,  
Ontario.:

MR. MASON: We are proud of having the  
most advanced plant, in terms of elimination of  
air pollution, in the country.

THE CHAIRMAN: You say you have the  
finest plant in the country?

MR. MASON: We think we have the most  
advanced; and we have spent something in the order  
of -- do not use these figures in your report, and  
I have toned them down, to be conservative, a  
couple of million dollars in this plant for the  
control of air pollution. It is probably in  
excess of \$2 million, if you take replacements  
and maintenance and operating costs into considera-  
tion.

We are an extremely diversified operation,



and as a result, we have natural problems which are typical of the industry and are not usually concentrated in one.

We have an alkaline pulp mill, a kraft mill with typical kraft-mill odour. As you came in, you probably noticed that odour. I would hope you did not notice it too much, because we think we have it under better control here than in any other mill on the continent.

We have a sulphite mill; we have the problem of S.O.<sub>2</sub> release. As between those two mills, we have spent the greater part of this \$2 million. It is impossible to say precisely, because many of the installations were developed here, and consequently, when they were put in, in the first place, they were experimental. Where corrosion took place in steel, we replaced with stainless. We replaced one section in connection with the sulphite recovery control.

THE CHAIRMAN: Do you import any sulphur?

MR. MASON: Yes.

THE CHAIRMAN: Where do you get it from?

MR. MASON: Texas.

THE CHAIRMAN: How much are you importing a year?





MR. MASON: Six or seven thousand tons.

THE CHAIRMAN: Why do you not buy it  
in Canada?

MR. MASON: It is not available. You may be interested to know that we are working with the Shell Oil, who are planning, although they have not yet installed it, a sulphur recovery system at their oil refinery in Montreal, and if they proceed with that, the probability is that we will be obtaining sulphur from them.

There is a bit of sulphur dioxide from the smelter at Sudbury, but every mill in the country, with the exception of a few in Sudbury which get sulphur dioxide, buy from Texas.

MR. ELLIOTT: You bring it in by boat here?

MR. MASON: We bring it in by boat.

MR. ELLIOTT: Right from Houston? The boat loads and comes right here?

MR. MASON: It has to be trans-shipped in Montreal. Our sulphur is somewhat cheaper, since we have boat transport, and in the long-run, we would probably be ~~be~~ the last to get Canadian sulphur because it is more likely to go into mills which have not the advantage of boat shipments.

There are great advantages to sulphur in



this form, but we are not favourably situated for it. We may be more favourably situated in relation to Shell in Montreal.

MR. THOMAS (Oshawa): Your conversation is certainly enlightening, because we have had quite a tussle with International Nickel.

They say they reclaim a lot of sulphur they cannot find a market for.

MR. MASON: An economic market. You may recover 20 percent. of the product relatively cheaply, and the next 20 percent. costs you more, and the next 20 percent. even more, and, until the cost of your recovery gets up where you cannot compete with boat sulphur from Texas. It is around \$35.00 a ton SO<sub>2</sub>, which is \$70.00 per ton of sulphur, against \$31.00 sulphur from Texas.

I think the problem is primarily economical, rather than technical. Things can be done if the money can be found to do them, in terms of getting the by-product, but you have to do it with a view to what you can sell it for.

MR. THOMAS (Oshawa): I suppose from time to time you get complaints about this odour?

MR. MASON: Oh, yes. But this is one of these things that, human nature being what it is,



sometimes you make more trouble for yourself by making progress than if you had done nothing.

In other words, for many years there was never a day that did not have a very pronounced odour. We have pretty well licked the odour except under unfavourable atmospheric conditions. When we have a muggy, humid day, with no wind, we have an obnoxious odour, and people gripe more then because they have not accustomed themselves to it, as they did when they had to live with it twenty-four hours a day, seven days a week.

You do not cut down public complaint in ratio to the progress you make in solving the problem. We have spent a good deal of money, and as we say, we think we have the smoke and fly-ash problem fairly well under control, at least to the point where our contribution to the problem in this community is practically negligible.

The boats which go through the canal and these resident small industries, laundries and the like, which operate without any attempt to control themselves, are contributing far more than we are to this problem.

We have this little circle of houses around us here in what should not be a residential





area at all. We are progressively buying them up. In the past year, we have purchased four or five; we are buying four more this year, so they are gradually going. Somebody gives us \$50.00, tears them down, and gets them out. People should not be living in this area, but we are practically on all sides of it, and the major problem here - I do not know whether it is in your jurisdiction or not -- is related to steam generation; the problem of coal blowing from the coal pile is more serious than smoke or fly-ash with adequate control systems.

THE CHAIRMAN: Are you sending some fluorine out into the atmosphere here?

MR. MASON: Practically none. We have no complaint at all, because we do not liquify our chlorine. Consequently, we do not have the problems of chlorine control which people who are making chlorine for sale, inevitably have. We are taking some of the hydrochlorate which C.I.L. produced in the last month. In order to cut down on the nuisance, they have to absorb the material; they do not have an outlet for it, and we are using it here in order to provide an outlet for it, because actually they have had more trouble than we have had.

When you get chlorine and hydrochlorate acid



from an operation such as theirs, you create damage; but we have had little indication of any of our products being unpleasant.

MR. MURDOCH: But when a gale blows, you get complaints?

MR. MASON: With high winds over a week-end, on Monday morning our phone begins to ring. We have people living on industrial property which, in fact, has never been developed as an urban area. The sewage system is tied in with our sewers; there is no municipal sewage.

While we are very conscious of a need, from a public relations point of view, and while we are doing everything we can, we are not a bit optimistic of being able to do anything to make this an attractive residential area.

MR. ELLIOTT: Is your plant represented on a planning or zoning committee?

MR. MASON: No.

MR. ELLIOTT: Perhaps you should be.

MR. MASON: We keep in touch.

THE CHAIRMAN: Are you in town or out of town?

MR. MASON: We are in the area of the township of Cornwall, which is going to be annexed



on the first of January.

MR. THOMAS (Oshawa): By the city?

MR. MASON: By the city.

However, we are going to submit our story to you, with some specific recommendations. We really appreciate your visit, and we think and hope it will be helpful to you, because, as I say we make no apologies for what we have done. We have gone further in this plant than any plant of which we know anywhere in the world; and most of the facilities, other than those in the steam plant, which are conveniently available to anyone, have had to be developed within our own plant.

We have a research department and staff, and I suppose our expenditure on it is over \$300,000 a year; and a substantial part of that programme is devoted to the abatement of these problems. This has been going on for twenty years, and many of the things which have been developed here have been widely adopted by the industry.

MR. ELLIOTT: Have you plans for future development, that is, further extension?

MR. MASON: We are always extending.

MR. ELLIOTT: You feel that in the course of the next twenty years, you will be expanding and



making further advances in the industry?

MR. MASON: Since this industry was formed in 1882 or 1883, there has never been a fifteen-year period in which the physical volume of output did not double. I am referring to the Cornwall Division of this mill.

MR. ELLIOTT: You should be twice as big fifteen years from now if you stand up to the market?

MR. MASON: Yes.

MR. ELLIOTT: How many employees have you on the payroll?

MR. MASON: 1700. About \$6 million of salaries and wages. As a result, we do not take the view that perhaps some industries do, that this air pollution problem is one which people should keep their hands off. The very growth and prosperity of the mill has led to control. Our very prosperity is creating an increasing problem for us; and what is the Mendelian or Malthusian law which says that "as you advance you create conditions which kill you"? There is that danger with this type of thing. Because we are prospering, the community grows around us; and, having grown around us because we prospered, they want to say, "You can no longer do this".





MR. ELLIOTT: Is there a possibility that you may convert to gas, eliminating coal?

MR. MASON: I think that is remote, because the price they are going to ask us for gas is going to be based on the value of the coal where coal cannot be brought in by water.

MR. ELLIOTT: You get coal cheaper?

MR. MASON: Cheaper than at places where they do not have water shipping.

MR. ELLIOTT: Gas may not be a big factor to you?

MR. MASON: It all depends on how they price it. My guess is they will price it based upon what it costs to buy coal in an area where transportation is not as favourable as it is here.

THE CHAIRMAN: It has been our experience that they rate coal as most expensive, then oil, then natural gas.

MR. MASON: Well, there have been exceptions over the years. It would appear that coal should be the cheapest here, and oil should be more expensive-- which is the reverse of what you say is usual.

THE CHAIRMAN: No -- coal, oil, gas.

MR. MASON: I thought you said "oil, coal, gas."



THE CHAIRMAN: No.

MR. MASON: The differential is even greater here, because coal can be brought to Cornwall cheaper than to Montreal, because the Pennsylvania fields are closer. It is inevitable, therefore, that coal should be cheaper.

Oil is more expensive, because the price is based on the Montreal pipe-line.

Coal comes here by boat from Rochester.

MR. MORNINGSTAR: You say you have spent about \$2 million to eliminate air pollution?

MR. MASON: Yes.

MR. MORNINGSTAR: Does this give you a municipal exemption?

MR. MASON: That is one thing I doubted if I should put in the brief. It is a question of whether I should put in a 40-page brief which nobody would read, or cut it to two or three pages.

DOCTOR EVIS (Secretary): We read every word. The International Nickel had one of about 95 pages. It seemed endless, but we went through it.

MR. MASON: There is no question, we are assessed on it, and it sort of "boils us up" whenever we look at our assessment -- with these things which we do which do not return us a nickel in most cases.



In the first stages, there is economic justification, when you have gross losses; but once you have reached a point where you have a reasonably efficient system, which costs you \$20.00 on the value of what you recover and you have to take that out, from the point of public relations -- and it has been public relations which has been behind it with us -- for as you know, with a location like this, based on legislation, there has been little necessity for the type of programme we have had.

THE CHAIRMAN: Are you saying that the present provincial legislation would not have forced you into the situation you are in today?

MR. MASON: The methods of enforcement. It has not been because we had somebody "yapping" at our heels to do something. It is through the Department of Health only that we would have demands for any control, under existing legislation, and we are fortunate that the nature of our effort is such that it has never been seriously suggested as damaging to health.

THE CHAIRMAN: It is a nuisance, more or less?

MR. MASON: It is a nuisance, and we recognize it as such, and try to minimize it, but we





do not have any current hope of its complete elimination. We are making progress all the time. Each year is a little better than the previous year. But it is a thing which appears to go to infinity.

THE CHAIRMAN: As someone who has been driving back and forth to Montreal for some twenty years, and driving by your plant, it seems maybe like an unfair thing to say in the face of your statement that \$2 million has been spent, but to the average traveller along the road in an automobile, the smell here now has not really changed much in twenty years, I would say, as far as my nose is concerned.

I realize that in twenty years this place has expanded tremendously, and you are spending \$2 million just to keep even. Perhaps that is the reason the smell is the same now as it was twenty years ago.

MR. MASON: Driving by is by no means a test. There is always some odour right at our fringe. We are more concerned in the dissemination of it into the community. I think it will be agreed that, as compared with five years ago, if we exclude these foggy, muggy days, when the stuff settles like a blanket and smells badly, 50 percent.



of the time there is no smell in the city.

MR. ADAMS (City Engineer): That is true. You have raised your boiler stacks considerably in the past few years.

MR. MASON: We have oxidized our liquor. We used to have about 65 percent. efficiency on that oxidization, and consequently there are a lot of sulphates. Nowadays, our oxidization has 99 percent. efficiency, so instead of producing malodours we produce sulphates which our scraping system takes out. In the last five years, we have reduced the measurable losses from these operations to perhaps 10 percent. of what they were, one or two parts per million.

With some of these sulphur compounds, you cannot smell your way to the source, because they are diluted to one or two or three parts per million. They are very unpleasant, but as you get closer, the odour disappears -- perhaps because they have an anesthetizing effect. In higher concentrations, you cannot smell them, but out on the highway you have this odour.

THE CHAIRMAN: If a neighbour down the street wants to complain, does he go to the city first, or to you?



MR. MASON: They call me. We do not have actually too much of it. I could give you a list of names, some housewives with whom we are in fairly regular touch. They call; and normally the complaints we get are justified and are the result of something happening, either human or mechanical. The system is working, and then something breaks down, or some fellow neglects to do something he should have done; and they get on the phone and we get busy and investigate it and try to find out what it was. I would say that 99 percent. of the complaints are either the result of some break-down such as that, or the wind blowing off a coal pile.

The wind and the coal pile results in perhaps 75 or 80 percent. of all the complaints we receive; and that is ~~a~~real progress, because five years ago, that was not the case; five years ago, our complaints were very different, they were primarily from the chemicals which were coming out of our stack, and being deposited, and they were complaining that they were hurting the paint.

THE CHAIRMAN: Your industry is not one of the exempted industries under present provincial legislation, is it?

MR. MASON: I do not believe so.



THE CHAIRMAN: Do you have any inspectors who call on you, or anybody, to check on air pollution matters? Do they call from the city or the province?

MR. MASON: No. What we have done, we have done from the point of view of public relations. I have been here ten years and we have never had an inspection visit.

THE CHAIRMAN: Well, they have no smoke control by-law; they have a nuisance by-law.

MR. THOMAS (Oshawa): Just a nuisance by-law.

MR. MASON: And we do not rank as the No. 1 nuisance.

THE CHAIRMAN: What is the No. 1 nuisance?

MR. THOMAS (Oshawa): The rendering plant. Is that the one you mean?

MR. MASON: Well, I will not itemize. I guess it is a lot better than it was. Unless it breaks down, it is not so bad.

The most serious problem is when we have these muggy days.

THE CHAIRMAN: Like today?

MR. MASON: It could be worse than today, because there is a breeze today. It is trying to rain,





and not succeeding, and there is a low-lying fog; that is when you get this odour along the highway, like a chemical smell, a damp odour, which picks up  $\text{SO}_2$  from the sulphite, and combines it with the noxious odour from the alkaline pumping, and the two of them together get very unpleasant. We know it. There is no use in not facing the fact on it.

MR. MURDOCH: When you go away, do you have any nostalgia about missing it?

MR. MASON: I would not say it was the kind of smell you would regret missing.

MR. MURDOCH: The people who work here probably never notice it.

MR. MASON: That is true of some, not of others.

MR. MURDOCH: There is just a smell, but nothing sharp about it to hurt your lungs?

MR. MASON: Well,  $\text{SO}_2$  is rather sharp.

MR. MURDOCH: Do you get any hydrogen sulphite in it?

DOCTOR TOMLINSON: The traces are very low. It is the mireapalon material which is objectionable, from the alkaline.

MR. MASON: This sharp odour, which uninformed people might think is injurious to health,



is not so, with the exception of the people who may have a physiological reaction to it, particularly an individual who has a tendency towards asthma. It is very bad for them, but it is well established the two are not harmful. As a matter of fact, the incidence of such things as colds among people who work regularly in this atmosphere is far lower than among the general population. Twenty-five years ago, it was seriously suggested that a method of reducing colds might be to put a small amount of sulphur dioxide in the air. I do not think it was ever established in terms of modern appraisal of these things, but there is absolutely no evidence that has ever been called to our attention of it being harmful in the concentrations which would result, although when something breaks down we can have very annoying and serious losses over a short period through sulphur dioxide. I refer to that in our brief.

We have tried to give you the story in the brief as it is, not necessarily as we would like it to be.

DOCTOR EVIS (Secretary): In one of these break-down periods, did you have any evidence of ladies' nylon stockings running, or anything like that?



MR. MASON: We have not had any complaints of any damage of that kind. There are other local industries which have had, where this matter is concerned; any industry which is putting any hydrochloric acid in the air, even in traces, can be a problem. We have had nothing of that. It has been a nuisance rather than damage with us, and it is these people who live right across the street from us. In due course, they will all be out; there is no question about it; because they are living under atrocious conditions.

THE CHAIRMAN: Was there actually a Howard Smith who started your Company?

MR. MASON: Yes. As a matter, the President of our Company is Mr. E. Howard Smith, now. Mr. C. Howard Smith was the founder.

MR. ADAMS: You say you spent \$2 million on mechanical appliances to overcome these problems?

MR. MASON: That, and their operation.

MR. ADAMS: Do you feel that further improvement could be made, if you had the capital? Do you think the present situation could be further improved?

MR. MASON: We know it could; and it is not primarily a matter of capital. Conditions have





been very favourable to this type of thing, because when you are carrying out a large programme, if you are spending \$10 million, any enlightened executive will allot a reasonable proportion of what is being spent to equipment of this kind.

We have been expanding, and as a result, we have had a condition where our executives have been favourable to including in the programme such things which have been thought to help this problem.

The problem of smaller industry is a very serious one. Take such a thing as smoke control: we put in a new boiler here three or four years ago, for fly-ash control, and the cost of installing that alone was \$110,000, and it costs us \$15,000 a year to operate, and it does not return a nickel.

THE CHAIRMAN: You do not save any fuel on it?

MR. MASON: You do not save anything. There is not one nickel of recovery. When you are spending a lot of money, you can include \$110,000 for such a purpose, but some industry which perhaps has only 10 percent. of our sales, or maybe not that, some laundry downtown, can be putting out more than we would be put out if we had not spent this \$110,000. However, with big industry, I cannot really believe



it is a matter of availability of capital under the present favourable business conditions, as much as it is the development of technology, -- knowing what to do and how to spend it.

We are working in connection with a sulphite mill. There are two ways of getting after this sulphur dioxide problem. One is to try and eliminate the problem with the present methods of processing, and the other is to devise a method of processing that does not create the problem.

Every year there is more improvement, and as the years go by, there unquestionably is going to be further improvement. There has not been a year, or six months, in the past ten years, that something has not been done.

THE CHAIRMAN: It was very interesting when you said you had spent \$125,000 without any return. In many of the places we have visited, many of the industries, both in the United States and Canada, the experts indicated to us that usually the money which is spent on air pollution equipment is more than made up in the amount saved in the reduction in the consumption of fuel.

MR. MASON: I do not think anyone tells you that on fly-ash, do they?



THE CHAIRMAN: In a general way, in the burning of coal, that is the fuel saved by the proper control equipment, makes up the cost of the equipment.

MR. MASON: Oh yes, we have spent that additional money, but our total is not \$110,000 in terms of efficiency. In a project of a million and a quarter dollars, we could have had just as high a fuel efficiency on the fuel steam cost, because we would have saved operating expenses in connection with it.

Had we spent \$110,000 less than we spent, we would have saved probably \$115,000 which is involved in the control and maintenance of this equipment.

DOCTOR TOMLINSON: Most of the things where we could obtain your major savings, we have done a long time ago. Now we are going after the things which are uneconomic; they do not amount to anything. A great deal of equipment which we have put in other things, has helped us economically. Initially, we received 75 or 80 percent., but to get the last few percents., the costs are more, and the return is not as great as in the initial case.

MR. MASON: The normal level of SO<sub>2</sub> release



from the sulphite pile at the blow, is about 50 to 60 pounds per ton. Our figures a few years ago ran about 55 to 58, something of that order. There has been roughly half a million dollars spent there, and that has reduced it to about 10, if I remember the figures correctly.

In other words, we have covered about 80 percent. of it; and while it was not perhaps an attractive investment to do that, at least there was a return associated with it. Because with 40 pounds of  $\text{SO}_2$ , - - 20 pounds of sulphur, - - at 60 cents a ton, that has returned the equivalent of \$25,000 to \$30,000 a year on a half a million dollar investment -- not too attractive, but at least not the kind of thing which is too unattractive.

But if we wanted to go from 10 to 5 percent., it might cost another half a million dollars, and to go from 5 percent. to 4 percent. may be another half a million dollars, and to go from 4 percent. to 3 percent. might be another million. You get into diminishing return on the thing.

THE CHAIRMAN: What steps have been taken to cut down the coal-pile business?

MR. MASON: We arrange with the shippers for the treatment of the coal at the point of shipment,





for which we pay a small premium.

We did that because the problem of unloading it, and dumping it on a pile is a very bad one; and then we tamp it down, and we have also done some covering.

MR. THOMAS (Oshawa): What did they do, impregnate it with some kind of dust allayer?

MR. MASON: No, we put a little oil on it to lay the dust. Frankly, we are doing these things so that nobody can accuse us of not doing something. It is of some help in this problem.

THE CHAIRMAN: How much do you burn a year?

MR. MASON: 100,000 to 120,000 tons.

MR. ELLIOTT: It comes in in barges, does it?

MR. MASON: No, it is in boats.

THE CHAIRMAN: You get enough to last all winter? That is what you are trying to do with the stock pile?

MR. MASON: Yes.

MR. THOMAS (Oshawa): How long does it take to unload a boat?

MR. MASON: Twenty-four to thirty hours.

THE CHAIRMAN: The time is rolling around. This part of the chat has been very worth-while.



A F T E R N O O N   S E S S I O N

Cornwall, Ontario,  
Thursday, November 15th, 1956,  
2:00 o'clock, p.m.

- - - - -

The further proceedings of this Committee  
reconvened pursuant to adjournment.

Mr. A. H. Cowling, Chairman,  
Presiding.

- - - - -

PRESENT:

Messrs. Elliott,  
Morningstar,  
Murdoch,  
Gordon,  
Thomas (Oshawa),  
Dr. F. A. Evis, Secretary.

APPEARANCES:

Mr. J. Morris,	Manager, Courtaulds, (Canada) Limited.
Mr. R. W. Lundy,	Assistant Manager, Courtaulds (Canada) Limited.

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---The following proceedings were had in  
the office of the Manager, Courtaulds, Limited:

THE CHAIRMAN: What do you make here,  
particularly?

MR. LUNDY: Textile yarns, staple fibres,  
Nasco, strong yarns for the tire yarn trade by a  
viscose process. The process is the treatment of  
wood pulp of high purity, treating it with caustic  
soda and pressing that out to get a rather dry  
sheet, drawing it up and treating it with carbon  
disulphide, which is quite a noxious and dangerous  
constituent to handle, and then dissolving that  
product again in caustic soda,  $CS_2$ , in combination  
with an alkaline cellulose formation which can be  
dissolved in caustic soda in a fairly thick solution  
which, after thickening, can be re-spun in an acid  
medium through very fine holes in continuous filaments  
of regenerated cellulose. That takes place in an  
acid bath.

Those filaments can be made into yarn of  
the continuous type which is used for weaving or  
knitting, or the filaments can be collected in large  
bundles on a continuous tow and cut to specified





lengths, which can then, after further treatment and purification, be used in yarn-making systems which are the same as, say, the cotton-spinning system or the flax-spinning system to form different types of yarns.

The strong type of yarn is similar to cotton, but has a stronger breaking strength, and is used almost exclusively for forming the carcass of modern passenger and truck tires.

Originally, we were making continuous filament types of yarns which we sold to knitters and weavers for making various types of goods, -- satin and knitted underwear and most of the linings in coats. That is in opposition to the staple fibre type of thing, which has to be carded and then spun to make a yarn which is made up of a series of small short filaments of specified lengths. Of course, there are different weights of yarns. We have to make filaments of various sizes, that is diameters, depending on the weight required.

THE CHAIRMAN: Do you make that material in wide rolls?

MR. LUNDY: No, we do not make the fabric, we make the yarn, which Goodyear and Firestone and so on, will take and put a twist in, and make a



fabric from it, and dip the fabric in rubber.

THE CHAIRMAN: Is wood pulp your basic material?

MR. LUNDY: We used to use spruce, but we are converted almost entirely to hardwood types of pulp, which are made exclusively for this industry.

THE CHAIRMAN: What is your main pollution problem?

MR. LUNDY: Our main pollution here, apart from any smoke generation -- chemical, you might say. Air pollution is entirely due to the use of carbon disulphide in the process when combined with alkalide cellulose. The material is treated with acid during the regeneration process to form the vital filaments of regenerated cellulose, and you get the regeneration of carbon disulphide, which is a toxic gas or vapour at normal temperatures, very low boiling point, quite poisonous in a concentrated condition, very highly volatile, as perhaps you may have noticed.

And along with that, part of that is regenerated as a regenerate carbon disulphide vapour, and you have quite a large volume of hydrogen disulphide. But when the xanthate is treated with the acid in the bath, that means we have to do a large amount of



ventilation, supplies of fresh air, and foul air from the spinning process has to be taken care of with very large exhaust fans.

We have, in addition, the boiler house stack and four main stacks, each about 165 feet high; and with the different units we have, making the different products, we are exhausting through these stacks some 700,000 cubic feet a minute.

That concentration of hydrogen bisulphide and carbon disulphide may be of the order of 20 parts per million, and at the exhaust point, once it meets the atmosphere, it is very quickly diluted down to perhaps 5 parts. Even under adverse conditions, we have never been able to detect at ground level, in certain areas where you would think would be affected by it, 1 or 2 parts per million; but you could detect carbon disulphide or hydrogen bisulphide.

THE CHAIRMAN: What about your building from which the black smoke is coming out?

MR. LUNDY: Is there black smoke?

THE CHAIRMAN: I noticed some when we came along.

MR. LUNDY: We have a boiler house there.

THE CHAIRMAN: Have you any control equipment



on it?

MR. LUNDY: Well, we were burning last year, I think it was about 125,000 tons of coal, and 50 percent. of that, roughly, is going through dust collectors.

We are putting in a new boiler with 100,000 pounds per hour of steam.

THE CHAIRMAN: Are you getting any complaints from citizens in the area?

MR. LUNDY: You mean from the standpoint of fly-ash and that sort of thing?

THE CHAIRMAN: Any complaints?

MR. LUNDY: There are no official complaints of which I know. I was away in England last year for about a year. We recognize the problem of fly-ash around our property, and there is some deposit of fly-ash, under certain conditions, both east and west from here, the prevailing wind being mainly west. Just how far that carries, I do not know. I have never been involved in any study of that particular thing.

But we have done some things to reduce that; such as these dust collectors; and we have talked about putting in some installations of equipment. At the present time, ordinarily there is quite a high





stack velocity through there, and it is all under combustion control, I might add.

I cannot say that we know of actual complaints by residents.

THE CHAIRMAN: Any steps which have been taken to reduce the smoke pollution around here, Mr. Lundy, you have taken pretty well on your own, have you?

MR. LUNDY: Yes.

THE CHAIRMAN: There is no local smoke abatement by-law?

MR. LUNDY: I do not know of any.

MR. THOMAS (Oshawa): Do you have any complaints about odours coming from the Howard Smith mill?

MR. LUNDY: I think -- we do not want to get involved in another area discussion too much. Every citizen in this town, I think, has at times complained about a digest blow-off privately among themselves, and told us sometimes it is horrible; and other times it is not noticed so much. It just depends on conditions.

Then of course they will say "Hell, that isn't Howard Smith; the wind is in the east, it is Courtaulds."



THE CHAIRMAN: It has to be one or the other!

MR. LUNDY: Well, you might get C.I.L. in the middle -- hydrochloric fumes.

THE CHAIRMAN: Really, the complaints are not too serious as far as you are concerned?

MR. LUNDY: No. If you intend to come in and look at the installations we have been putting in here to make sure that we have quite an efficient rate of exhaustion of these noxious gases, I think you would be impressed with the amount of money which has been invested in that end of it. That is a necessity in the rayon business.

Courtaulds of England are quite aware of all that sort of thing.

MR. THOMAS (Oshawa): Have you any idea of how much you spend on remedial measures?

MR. LUNDY: To exhaust the gases we make? Oh well, there are several million dollars tied up in exhaust equipment. One of these stacks alone costs -- the stack itself -- \$300,000, apart from all the sub-ducts and fan equipment and all that. We can show you that any time you would like to see it.

DOCTOR EVIS (Secretary): I suppose that



is just blowing it out into the atmosphere?

MR. LUNDY: Yes. As I say, by the time it reaches the atmosphere, it is dispersed down to a very low dilution.

In other words, as far as inside operations are concerned, we are in contact with the Department of Health all the time, because we have to keep operating at a low level of hydrogen and carbon disulphide concentration. There is legislation on this which is quite explicit, and we do report every month. We send the results of a series of tests made by our technical people every day around the working equipment to show what the actual level of concentration is.

It is quite tolerable to work in an atmosphere up to 10 parts per million combined in a million parts of air, which is a very low concentration; but we have to keep it low for health reasons.

When the exhaust reaches the atmosphere, I would say it is down around 8 parts, and then of course beyond that we get a rapid dilution with the ordinary purification of the air stream.

So, as I say, I do not think we have ever detected any more, at ground level, any place within a very large radius, than 1 or 2 parts per million,





under the worst conditions.

THE CHAIRMAN: How many people do you employ here?

MR. LUNDY: Oh, I guess about 2,200.

THE CHAIRMAN: Are you on twenty-four hour shifts?

MR. LUNDY: The main parts of the process, yes. They carry on 168 hours a week, because that is continuous process, and takes roughly the better part of the week to begin on seeping of the pulp sheets, to the point where they are spinning the small orifices into a spinning lathe. It is a two-shift operation.

THE CHAIRMAN: Are you bothered quite a bit with smoke from the ships?

MR. LUNDY: Well, it is quite noticeable at times. I would not say to what extent we are bothered with it right here at this point. I know I have a cottage at Hamilton Island, which is ten miles east of here, and they come by very close, and at times it is quite a nuisance.

DOCTOR EVIS (Secretary): Their smoke does not interfere with your processing at all?

MR. LUNDY: No. We have to have a very large intake system for the fresh air supply.



THE CHAIRMAN: Are you submitting a brief this afternoon -- your Company?

MR. LUNDY: No, we had not considered submitting a brief at this time.

THE CHAIRMAN: You are co-operating with the Manufacturers' Association in the submissions they are making?

MR. LUNDY: Yes, we are quite active in the C.M.A.

THE CHAIRMAN: You are on that Air Pollution Committee, are you?

MR. LUNDY: Yes; I was sent up as representative of their special committee to report to the Select Committee, and they made a very comprehensive report. They put quite a bit of time on it.

THE CHAIRMAN: When you are ready, we are going to arrange for you to meet in Toronto and have you go at it for a day.

MR. LUNDY: I think the answers give a pretty fair idea of what the general attitude of the C.M.A. is as a whole. The thing has to be quite general at this point. The question of air pollution in reference to some of the manufacturing processes, similar to our own and Howard Smith Paper, refineries,



and so on, control an actual establishment of standards, as to what is a tolerable limit, require so much more research and knowledge than is on the books at the present time, and is quite a long-range thing.

THE CHAIRMAN: I guess we will have to put this off. We did want to come out and see your place, and meet you, because you had written in and shown a great deal of interest -- which is much more than many others have taken the trouble to do, to be quite frank.

MR. LUNDY: Well, of course in this business, we have been involved in the question of dealing with certain pollutants right from the beginning of the business, which dates back to maybe 1900 in the Old Country, and 1900 or thereabouts here.

MR. GORDON: Where are you located in Britain?

MR. LUNDY: There are two large mills in North Wales; the original one is in Coventry; one in Wolverhampton; one at Preston, and one over at Carrickfergus, near Belfast. These are yarn-producing mills; but they have a number of subsidiary mills where they make up fabrics.

MR. GORDON: Are you connected with J. P. Coates?

MR. LUNDY: No.

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P U B L I C      H E A R I N G

Cornwall, Ontario,  
Thursday, November 15th, 1956,  
3:30 o'clock, p.m.

- - - -

---Following a tour of industries in Cornwall,  
the following proceedings were had:

APPEARANCES:

Mr. A. Horovitz,                      Mayor, Cornwall.

Mr. F. B. Brownridge,      City Clerk, Cornwall.

Mr. Fred Cass, Q.C.M.P.P., Grenville-Dundas.

(For further appearances, please  
refer to page 3215 )

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THE CHAIRMAN:      Gentlemen, we will call  
the meeting to order.

Our member, Fred Cass, is with us today.  
I have a telegram from your member for Cornwall and  
district, Mr. Peter Manley.      He says:

"Re letter November 12 regret unable to  
accept invitation due to sitting of Toll  
Roads Committee.      Wish you success.

(signed)      Peter Manley, M.P.P."





So we know Mr. Manley is busy on another Committee today, and that is why he is not here.

Before telling you the purpose of our Committee, and what we are charged to do, I would like to ask the Mayor to say a word at this time.

HIS WORSHIP MAYOR HOROVITZ: Mr. Chairman and Mrs. Mack and gentlemen; it is my pleasure as Mayor of Cornwall to welcome your Committee to the city.

I cannot say very much about our smoke nuisance and about other things; there is an election coming on, you must remember, this fall; so I will have to be a little neutral in that respect.

I do not like to complain. We have our problems; nevertheless, I think there are people here who will tell you more about it. There are various industries represented.

I understand you visited the Howard Smith mill and Courtaulds and other industries. As you start your hearing, I am sure there will be complaints from people, but you will deal with them as you see fit.

Thank you very much for coming here to Cornwall. Probably you will be able to solve some of our problems.



THE CHAIRMAN: Thank you for those kind words. I think it would be nice to hear from our colleague, Mr. Cass.

MR. FRED CASS, Q.C., (M.P.P.): May I ask your indulgence to say just two words; one is to answer your invitation and the other is that, due to pressure of events, I am forced to leave very shortly. I had unreliable information that you were sitting at two-thirty.

The smaller municipalities of my riding, of which Prescott is one, and another two are Winchester and Chesterville -- are one-industry towns. They have one industry, and it does provide quite a problem in regard to air pollution in the community. Unfortunately, representatives from these municipalities are unable to be here today. They asked me if I would bring to your attention, that not only in the large industrial giants, such as Metropolitan Toronto and Hamilton, but there is a problem in the small places as well; and I would like on behalf of the municipal authorities in my small towns, to draw to the attention of your Committee this problem which the small towns have, and ask that you consider them when you are making up your report and recommendations.



There is nothing useful we can submit in the way of evidence, because the evidence you will hear is the same as that in the smaller centres. So, in welcoming you to my district, which is west of here, I ask your assistance on behalf of the rural towns which do have usually a one-industry pollution problem.

THE CHAIRMAN: Thank you, Mr. Cass.

The purpose of our Committee is to study the question of air pollution and smoke control in all its phases, and report, and forward recommendations to the Ontario Legislature.

We were first constituted in March of 1955, and before we had an opportunity of really getting into the problem, there was an election announced, and everybody took time off to be re-elected, which was very important, because you cannot do anything if you are not re-elected.

In September of 1955, the Committee was re-constituted, and we have been very active since that time. We have visited many of our cities in Ontario: to mention a few, Windsor, Sarnia, Sudbury, London, Niagara Falls, Welland, Toronto, Hamilton, Brantford and down east to Belleville, and Brockville, Cornwall, Ottawa, and so on.





We have had an opportunity to study the situation across the line. We have been out to Los Angeles and San Francisco, Chicago, Philadelphia, Detroit, Pittsburgh, New York and some others. We have a wealth of information on the subject.

Generally speaking, Ontario is in pretty good shape, air pollution and smoke-wise. Everywhere we travelled in the States, they commended the Committee on having the foresight to look into this problem now and do something about it before our cities in Ontario get into the rather serious situation many cities are in across the line.

Briefly, that is what we are endeavouring to do.

I would like to say we have had a great deal of co-operation from our people in Ontario. Our public hearings have all been well attended, and we have gained much knowledge of local situations from that source.

This morning, with Mr. Adams, your City Engineer, we have toured around to some of the larger industries here in Cornwall, particularly the Howard Smith Paper Company and Courtaulds Limited.

It was my pleasure on behalf of the Committee to address the Air Pollution Committee of the Canadian



Manufacturers Association in Toronto two or three weeks ago. Mr. Lundy, from Courtaulds, was there, and perhaps some others in this room attended. There were 60 or 70 firms represented at the meeting -- which indicated again the interest of the industry in the problem.

In other words, everybody is co-operating to do the right thing to make our great province a nicer place in which to live.

Are there any private citizens here in the room who would like to address the Committee? When I say "private citizens", I include everybody in the room. Are there any citizens who would like to address the Committee?

MRS. MARY MACK (Alderman, Cornwall City Council): I believe I should speak for the people in the East Centre Ward. Through all my years in office, I have been continually called upon by people complaining about smoke nuisance -- smoke nuisance beginning with the Department of Transport and Canals, and similar groups in the community which burn soft coal, the Canadian Pacific Railway, the General Hospital, the Public School, the Beaver Lumber Company, the Daisy Dairy. Some of them are coal-burning.



I feel that, while, as the Mayor has said, this is election time, I have to convey to you that my constituents have reported these things over the years. I had calls this morning saying they had seen the Committee was meeting. So I have to convey to you what I know is a great nuisance. We have a great deal of smoke.

I am not saying anything about odours, because it all depends where you are when the odour comes down, and it all depends on the atmosphere.

You are here on a day that is rather dull; if you had come on a bright day, you would have been able to see in which way the smoke might have been going.

As the Mayor knows, there was a letter come to us at the last Council meeting, and they felt when you were meeting here today, their complaints should be brought to your attention. They are not involving very large industries, although some of the very large industries may be involved, because they undoubtedly contribute to the odours coming with the smoke.

But I am continually called up about this. In the morning, these smaller industries start fouling up the air when people are hanging out washing;



and the Aldermen get telephone calls. So I think we have a smoke condition which requires attention.

THE CHAIRMAN: Thank you, Alderman Mack.

I might say, following what the Alderman has said, and also the Mayor, that every member of this Committee has served on a municipal Council, and we know that a week or two ahead of election time it is pretty rough on the local representatives to get up and say what they think perhaps deep down in their hearts. Fortunately, our members are not too much concerned with an election -- in the next couple of weeks, anyway.

MR. THOMAS (Oshawa): Couple of years.

THE CHAIRMAN: Couple of years.

So we appreciate your comments, Alderman Mack. I hope they will not interfere with your re-election.

ALDERMAN MACK: I think it would interfere with it more if I did not say that we have a big problem.

HIS WORSHIP MAYOR HOROVITZ: Mr. Brownridge, you have a petition. We referred this petition to this Committee at our Council meeting on Monday night, and I think it might be well for you to bring it before the Committee.





THE CHAIRMAN: While Mr. Brownridge is getting that petition, allow me to say that we had a very successful night meeting in Brockville yesterday, and two of the -- I suppose -- more courageous Aldermen attended, and I can assure you that they were well loaded with questions. They are probably having an election about the same time as you are, but they handled themselves particularly well.

I note Mr. Mason is here from the Howard Smith Paper Company. We had a really nice meeting with him this morning. He brought out some very interesting facts which I know are going to be helpful in our final recommendations to the House.

Are you going to present that brief now, Mr. Mason?

MR. MASON: Mr. Fennell is representing us.

MR. S. E. FENNELL: We have had copies of our brief mimeographed. If I may present you with copies, you will be able to follow it.

Mr. Chairman and gentlemen; at the outset may I tell you that this submission is made in a spirit of co-operation, and in the hope that it will be of assistance to you. I do not know whether Mr. Mason told you this morning or not, but this Company has a large Research Department, and I am happy that



not only is Mr. Mason here with me, but also Doctor Tomlinson, the Research Director of the Company.

The brief reads as follows:

"Submission by Howard Smith Paper Mills Limited

The Cornwall Division of Howard Smith Paper Mills Limited is an integrated pulp and paper operation located on property which is at present outside the western boundary of the city of Cornwall but which is included in the area to be annexed by the city of Cornwall on January 1, 1957.

Pulp and paper operations at this location were started in the early 1880's and included both the manufacture of paper and the manufacture of sulphite pulp. Sulphite pulp has been produced at Cornwall since 1887 and this operation predates all other sulphite operations in Canada.

For approximately 70 years this industry has been a major factor in the growth and prosperity of the city of Cornwall and the surrounding district. Facilities have been continuously expanded and today it is one of the major pulp and paper operations in Canada, employing approximately 1700 people



with an annual payroll in excess of six million dollars. Production exceeds 400 tons per day of bleached chemical wood pulp, 225 tons per day of fine papers, caustic soda and chlorine required for processing operations, as well as by-products such as lignin and vanillin.

While for the first 50 years of operations, the smoke, fumes and odours associated with this type of industry may be assumed to have been accepted as an inevitable and irrevocable characteristic by both the industry and the surrounding community, the past quarter century has seen a growing demand by communities and increased consciousness by industry of both the necessity and urgency for the development and installation of facilities to minimize, if not to eliminate, the nuisances traditionally associated with operations of this kind. As a result the investigation and correction where practical of all aspects of air and stream pollution has been the subject of constant research at the Cornwall Division of Howard Smith Paper Mills, the improvements in industrial technology with respect to this





problem have been constantly reviewed and the facilities required to reduce the nuisance have been constantly extended. These facilities now incorporate the most modern features available for such purposes and include many features developed by our own research and subsequently widely adopted by others in the industry.

Corporations and individuals intimately associated with the problems of air and steam pollution over a period of years cannot fail to note with some apprehension the growing trend in some areas towards legislative control which fails to recognize the complexity of the problem, the state of development of available technology or the economic effect of the controls. As a result we believe that the Government of the province of Ontario are to be commended for their approach to this difficult problem and the establishment of this Select Committee on Air Pollution and Smoke Control, with the objective of recommending legislation which will be both practical and effective. We are grateful for the opportunity to present for your



consideration some of the conclusions which we have reached as a result of our experience.

The major pollution problems arising from the diversified operations at the Cornwall Division of Howard Smith Paper Mills are as follows:

1. The characteristic odour of alkaline pulping operations and the presence of chemicals such as lime, sodium sulphate and sulphides in the stack gases from these operations.
2. Losses of sulphur dioxide gas to the atmosphere from sulphite pulping operations, particularly as tail gas from the so-called 'acid plant' and in the gases released when the sulphite digesters are 'blown', that is discharged under pressure to receiving tanks.
3. Smoke and fly ash arising from burning in excess of 100,000 tons a year of coal for steam generation.
4. Stream pollution involved in the use of approximately fifty million gallons per day of water for process purposes.

While it may be assumed that the Select Committee on Air Pollution and Smoke Control



is not concerned with technical details of these problems, we feel that the Committee may be interested in the broad aspects of the program which has been carried out at Cornwall Division in recent years in that it illustrates the complexity of the problem, the cost of the installation and operation of facilities, the degree of improvement which has been obtained, and the limitations based upon the state of knowledge and economic considerations.

Pollution problems arising from the operation of an alkaline pulp mill are perhaps the most serious of those associated with pulp and paper manufacture, because of the persistent and obnoxious odour of the gases developed by this process and the nature of the chemical materials present in stack gases and other fume. Facilities installed to minimize this nuisance involve complex systems for the collection, conveyance, scrubbing, oxidation and finally venting through high stacks to ensure dispersion of the gases. Facilities generally have been developed locally on the basis of intensive research, and despite the



fact that initial installations were constructed of mild steel in view of the experimental nature of the installation and in consequence show high maintenance and short life due to corrosion, the total expenditures for such equipment in the past ten years have been in excess of \$250,000, and the replacement of initial equipment with corrosion resistant installations which is proceeding as the original units fail, represents a capital requirement of not less than \$500,000.

This program with respect to alkaline pulping nuisances is as advanced as any installation in the world and has been widely publicized through technical journals and technical association meetings and is being adopted by many alkaline pulp mills as the objective for the improvement of their local situation. Unfortunately it has by no means completely solved the problem, and although we feel that conditions generally do not involve appreciable discomfort or annoyance to the community which surrounds us, it is recognized that under unfavourable atmospheric





conditions, and particularly conditions of low wind velocity, high humidity and fog, some of the surrounding community at times suffers from the annoyance and discomfort of unpleasant alkaline pulp mill odours. The problem is the subject of continuing intensive investigation with a view to development of further improvements and ultimate elimination of this problem.

This program, while by no means eliminating all nuisance from these operations, has produced a significant improvement. Losses of sodium sulphate in the main stack from the alkaline pulp mill have been reduced from 55 to 60 lbs. per ton of pulp produced in the period up to and including 1950, to a current level of from 15 to 20 lbs. per ton. The oxidation of sulphides in black liquor which is directly associated with malodorous releases has been increased from 65% efficiency in the period prior to 1950 to 99% at the present time. Losses of sodium salts from the lime kiln stack five years ago averaged approximately 7 lbs. per ton of pulp production and has now been reduced



to slightly under one pound per ton.

Calcium carbonate losses from the same source have been reduced from approximately 20 lbs. per ton to the order of 3 to 4 lbs. per ton.

In the case of sulphite operations, similar collection, absorption and venting systems have been installed which represent an investment of approximately \$500,000 with the result that the amount of sulphur dioxide discharged to the atmosphere when digesters are blown, has been reduced from the 'normal' level of approximately 50 lbs. per ton to approximately 10 to 15 lbs. per ton, and the sulphur dioxide present in the vent from the acid plant which, as recently as 1950, amounted to approximately 20 lbs. per ton of production, is now approximately 2 lbs. per ton.

While these improvements are undoubtedly substantial and under normal conditions have reduced the sulphite pollution problem to a tolerable level, there are still unfortunate experiences arising from either human or mechanical failure which result in excessive discharge of sulphur dioxide, although the



incidence of such failures is being progressively reduced.

The problem of smoke and fly ash control from coal burning steam units can be minimized through the use of conventional equipment. Techniques and standards of operation and control are available. The problem of the application of these techniques is essentially an economic one as illustrated by the fact that the initial cost of smoke and fly ash control equipment for one pulverized fuel boiler producing 175,000 lbs. of steam per hour, which was recently installed in our mill, was approximately \$110,000, and the maintenance and operation of this equipment for the year 1955 cost approximately \$14,000. This equipment operates at an efficiency of approximately 86% and reduces the total dust entering the stack to 4.3 lbs. per minute of very fine material, of which 55% passes a 270 mesh screen. This fine ash is discharged to atmosphere through a 250 ft. stack and we believe that the smoke and fly ash nuisance from our operations are negligible in comparison with the unregulated





discharge of smoke from boats passing through the Cornwall Canal and other adjacent sources of contamination including residential and commercial properties.

As a result of our experience and investigations in the field of air pollution, we respectfully submit for the consideration of the Select Committee on Air Pollution and Smoke Control the following recommendations:

1. The complexities of the problems involved in the control of pollution from specialized industries and the technical qualifications required for the investigation of these problems, and the development of realistic regulations and controls, make it desirable that legislation and control measures should, with the possible exception of smoke and fly ash control be enacted and administered at the provincial level. The creation or extension of powers to regulate this problem at the municipal level would involve the municipality in unnecessary expense for technical and professional assistance which is not normally available to them and create the possibility of gross inequalities affecting



the competitive position of industries in different locations due to lack of uniformity of local approach.

2. The basis of control should be sufficiently flexible to provide the control agency with reasonable discretionary powers based on the nature and location of industry, the proven technology of control procedures available and the cost of facilities required. Control regulations should not operate to penalize industry which has voluntarily adopted modern techniques.

3. The problem of stream pollution and water contamination was referred to in our tabulation of principal sources of pollution, and whereas it would appear to be outside the terms of reference of the Select Committee on Air Pollution and Smoke Control, we would emphasize that in practice these problems are closely inter-related and in some measure inter-dependent, and we believe that administratively the regulation and control of both water and air pollution should be consolidated for administrative efficiency, for the most effective utilization of



technical resources and simplification of industrial contacts associated with the development and enforcement of appropriate regulations.

Howard Smith Paper Mills Limited are happy to co-operate with this Select Committee or with any Authority which may be established to deal with these matters.

All of which is respectfully submitted.

(signed) H. E. Mason,

Mill Manager.

(signed) S. E. Fennell,

of Counsel."

THE CHAIRMAN: Thank you very much, Mr. Fennell. It is a very excellent brief, and I am sure some of the members will have a question or two to ask in connection with it.

Mr. Mason mentioned this morning, but just again -- what was that figure you are spending on research? \$200,000 or \$300,000?

MR. MASON: A little in excess of \$300,000 a year.

THE CHAIRMAN: I was very much interested in your recommendations today, that the smoke and fly-ash be controlled at the local level, and others be



at a provincial level. I wonder if you would care to just enlarge on that a little?

MR. FENNELL: Well, may I put it this way; outside of the smoke fly-ash problem, the other matters are very complex, they are very difficult, and they are very expensive. If you have one industry, say one paper mill, in one locality, having to put in extremely expensive equipment, and its competitors in the same province not having to put in any control equipment, the equipment is so expensive that it would affect the ability of that industry to operate profitably. That, I think, is one of the reasons.

Again, as I said in the brief, there is not usually available to the local municipalities, the professional services which are necessary to deal with these problems. It is something which requires experts.

The mere fact that this Company is using the very best of research experts on the matter is an indication that the average employee of a municipality is not competent to deal with the problem.

Smoke and fly-ash are something that, as Alderman Mack pointed out, you run into with every little factory or warehouse or hospital or school or laundry, or anything which burns soft coal;





but when you get outside of that field, it is a very difficult problem.

THE CHAIRMAN: Would you just like to comment or give us your slant on this question, Mr. Fennell? There appear to be two alternatives: that is, the setting up of a special division in the Department of Health, say, to look after and administer air pollution, or the setting up of a Commission or Board, something along the line of the Ontario Water Resources Commission, to look after the situation at the provincial level, to which local municipalities and industries could go for technical and scientific, and possibly, financial assistance.

MR. FENNELL: I would much prefer the situation of setting up an Authority such as the Commission, rather than have it dealt with by a department of government.

They could then have available experts who could deal with the problem, who might not be available to a department of government; and some Authority similar to the Water Resources Commission, I would respectfully suggest, would be much preferable.

THE CHAIRMAN: Do you want to say something, Mr. Murdoch? (No response). Well, if there are no



further questions, Mr. Fennell, we appreciate your brief.

MR. THOMAS (Oshawa): There is just one question I would like to ask Mr. Fennell.

Do you really think, if provincial regulations were introduced to leave to the local authority to enforce, it might have a tendency towards unfair competition among different municipalities in attracting industries? One municipality might be more lax in enforcement than another? Do you really believe that?

MR. FENNELL: That is just one of the factors involved in the problem. I do not think it would involve so much unfair competition; it is liable to involve existing industries more. One municipality might say, "You have to do a certain thing", which might involve millions of dollars, and where this company's competitors were operating, the municipality might do nothing. I am not talking about attracting industry; I am talking about the industry which exists.

MR. THOMAS (Oshawa): Presently established?

MR. FENNELL: Yes. And that is only one of the problems. Once they say you have to do something, the question arises, do they do it, who is going



to see if they have done it or not, or whether what they have been ordered to do is a fair regulation, if they have not technical know-how, the men experienced in this type of thing.

THE CHAIRMAN: We know that. The problem of air pollution in this country is a comparatively new one, and actually trained men in the field are not easy to come by. We know that, because in many of our larger municipalities, they are setting up efficient smoke control committees and authorities to operate effectively local smoke control, but they are having trouble getting the right types to operate them.

MR. MORNINGSTAR: I feel this is a very, very nice brief. This firm has spent large sums of money. I was wondering if they had done this voluntarily or whether the city asked them to do that, or whether it is just good public relations, that they are showing leadership in this part of the province.

MR. FENNELL: The effort here was a voluntary effort for the sake of good community relations.

MR. MURDOCH: I would like to assure Mr. Fennell that the Committee realizes, as you say, that pollution extends beyond the borders of any





municipality, and there will have to be some over-all legislation to cover the small municipalities where there is a nuisance, and cover a situation, of course, where the pollution may have arisen in one municipality, but is actually polluting people living in a neighbouring municipality.

Many industries are located in townships. The people there might not be suffering from pollution, but they might be in the neighbouring town or city.

THE CHAIRMAN: I wonder if you would like to comment on enforcement? That is something which has given the Committee quite a bit of concern. We realize, as you do, and other men in this room, that there is no point in passing legislation which cannot be enforced or will not be effective, and that any provincial legislation has to be realistic, it has to be practical. You have to use common sense in this thing. You cannot just pass a law and say "Everybody should abide by it". That is silly.

One of the problems is going to be enforcement. Would you care to comment on that? Would the enforcement be more effective at the municipal level or at the provincial level?

As you know, the regulations, for example, of the Provincial Health Department, come right down



to the municipal level. We can think of the Ontario Provincial Police as an enforcement group. What would be your views on this enforcement situation?

MR. FENNELL: May I answer your question this way: the enforcement or regulations with regard to air pollution is very closely associated with the pollution of streams, and most of the experience with the regulating of stream pollution has been in the United States.

I understand it has been effectively dealt with at the State level rather than at the municipal level, and I suggest that the enforcement of regulations insofar as air pollution is concerned would be much better dealt with at the provincial level, through some Authority like, say, the Water Resources Commission, which would have men who would be trained and would be able to enforce regulations.

For example, it would be a very unfair thing if you said to an industry which was trying to solve a problem, and had spent considerable money on it, and was trying to deal with the matter, "You will improve your facilities to control this by 50 percent.", and if you said to another industry which had done nothing on it, "You can improve your facilities by 50 percent.". That would be a very



unfair means of enforcing regulations.

THE CHAIRMAN: What do you think of the idea of taking an inventory of all industries throughout the province to find out what they have, and what they have done, and what could be done, before starting out on a programme?

MR. FENNELL: We have no objection to that.

THE CHAIRMAN: In that way, we would know those firms which had spent money.

MR. FENNELL: That is right.

THE CHAIRMAN: And those who had not.

MR. FENNELL: Yes.

MR. ELLIOTT: There is another problem, too. There is a small industry, probably, which is very competitive throughout the province, and their profits are very small, and that industry may not be in a position to put in the equipment which is necessary to clean up the problem to help the municipality. Do you think it would be right that the municipality or the provincial Authority, should or could step in and put in the necessary equipment to clean the problem up, and more or less rent it to them or loan it to them over a number of years, to get their money back in that way?

MR. FENNELL: We have not given that problem



any consideration, to my knowledge.

If you ran into real financial problems, that might be an answer to it.

MR. ELLIOTT: I believe that is done in some places in the United States.

THE CHAIRMAN: I think you might like to know this: you rather commented on the fact that air pollution and water pollution are in the same line and could be administered jointly.

I think our studies to date indicate that that perhaps is not a reasonable thing. We were down visiting in New York. They have a very good air pollution administration in the city of New York; and they say definitely that you cannot tie water in with air pollution. At the State level, in the State of New Jersey, they mentioned the same thing, that they just would not work together; and in further support of that, our International Joint Commission, representing Canada and the United States, feels that the matter of air pollution should not be joined with the problem of water pollution.

I thought I would just mention those views to you.

MR. MORNINGSTAR: Also, as you know, the





Committee has learned a great deal about these industries, to the effect that as a result of spending money on equipment to deal with air pollution and so on, they have obtained by-products which in the long run, provide revenue, and so pay for the improvements.

I wondered if that has been your experience here; whether the money you have collected from the sale of by-products has helped to pay for the cost of putting in and running the system?

MR. MASON: Perhaps I should answer that question. Our general experience has been that in the initial stages of installation, while they may not be attractive investments, you may be able to invest \$100,000 and in the initial stages, when the problem has not received a great deal of attention, you can make a return which could probably go a long way towards justifying the investment; but in subsequent steps, those actions really produce results which would satisfy the community.

I refer specifically to the boiler house, on which I gave you those figures of \$110,000 for initial cost, and an operating expense of \$14,000 or \$15,000 a year -- something of that order. But these expenditures have not produced one nickel in return. That money was spent exclusively to take



fly-ash out of gas from which heat which could be extracted effectively had been previously extracted. In the case of the pulp mills, it is probably a fair assumption to say that in the early stages of the programme, perhaps 50 percent. of the money which we spent afforded a significant return.

But, as the programme has advanced, the money we have been spending in recent years has been primarily spent to reduce a nuisance. The returns are such that are almost negligible, when you get to the later stages of the programme; and in trying to get on down to the level of what we might call perfection, that kind of thing, in our type of industry, does not give you a return.

MR. ELLIOTT: It is necessary, in your plant, or in any other where there are as many as 1700 employees, to do a reasonable job to keep them happy, let alone the neighbours.

The employees would not be able to work efficiently if they did not have reasonably clean air.

THE CHAIRMAN: Are there any other questions of Mr. Fennell? If not, thank you very much, sir, for coming down.

Is there someone else here who would like to address the Committee?



MR. HUGH STEPHENS: If there is no one else to take up your time, I would like to make a submission which has been prepared on very short notice.

THE CHAIRMAN: They are all very thankfully received.

MR. STEPHENS: I am Executive Director of a small chemical company, which recently moved into Cornwall. I have some copies of my note. Would you like me to read it, or would you prefer that I hand it in?

THE CHAIRMAN: Perhaps you would read it, and let us have copies.

MR. STEPHENS: This reads as follows:

" Air Pollution

Kemball, Bishop & Co. (Canada) Ltd. is a Company producing, by processes based on microbiological oxidation, substances in tonnage quantities to Analytical Reagent specifications. In all stages, freedom from air pollution is of vital importance, as airborne dust and noxious gas contamination have been proved, by long experience, to lead to serious economic loss.

Even longer experience has demonstrated





the difficulty of realistic appraisal and control of contamination, calling for modern laboratory facilities and highly trained personnel as a basis for enforcement. It is in our opinion impractical to suppose that a community of less than 100,000 population can sustain the means of proper appraisal of risk and enforcement of reasonable legislation. As so much of the industry of Ontario is situated in municipalities of less than this minimum population it seems to be an inescapable conclusion that a competently staffed and equipped central authority should be responsible for future air pollution control.

It is further felt that in framing legislation, due regard should be paid -- as, for example, in the Niagara Falls (U.S.) ordinance in this matter -- to secret processes."

MR. THOMAS (Oshawa): Would you care to say what you mean by "secret processes"?

MR. STEPHENS: Processes the owners of which would not wish any person not bound by contract to them to examine.

Speaking from a rather shaky memory about



the Niagara Falls ordinance, I understand there is there a permit system which enables pilot plant operations to be taken on a temporary basis, -- operations which emit nuisances which are recognized as temporary. The permit is only for a limited time, the understanding being that subsequent to that limited time, the process ceases to be a pilot plant operation, and then is subject to full-scale control.

But in that area, there are a fair number of chemical companies which operate secret processes which in themselves are not nuisances.

It appears to be accepted that a statement of the nature of the nuisance produced by the secret process is accepted, and a statement of the company's attempt and success in minimizing the nuisance is accepted in good faith.

MR. ELLIOTT: That will be developing companies?

MR. STEPHENS: Not necessarily. Companies which have developed processes are not yet in regular use, or which they may not be willing to patent because the patent protection is only for a limited period. There is in the chemical industry, a long tradition of secrecy of process, for economic protection.



That is why I wanted to bring this to your attention.

THE CHAIRMAN: It is a very good point, Mr. Stephens, and it is the first time we have had it brought to our attention. So now we will be looking into this secret matter.

MR. STEPHENS: Thank you.

Perhaps I should say that my experience of dust contamination and noxious gases is confined to the Old Country, not to Cornwall. We started in Cornwall, and, after carrying a number of rather suspicious noses around, we decided that Cornwall would be a suitable place to put in an industry which is nominally at the receiving, not the producing, end of contamination.

THE CHAIRMAN: Mr. Stiles, the City solicitor is here, and I understand he would like to make a comment on this problem of air pollution.

MR. GEORGE A. STILES: Gentlemen, the Mayor asked me if I would address some remarks to this Committee, because I think the elected representatives of the municipality feel now that they should be extremely cautious in what they say.

However, what I would like to say, is that I think all of the Council feel that the work which is



undertaken by this Committee is a great step in the right direction, and I think it indicates that there is a growing awareness on the part of the governmental authorities that there needs to be investigation and there needs to be, and there certainly is, as time goes on, a greater awareness and a greater co-operative spirit on the part of the people who cause pollution of one kind or another in the air; that between the "bunch" of us, we can do something about it, and minimize it.

I realize that is exactly what you gentlemen are trying to investigate.

Cornwall being, as it is, an industrial area, we have had in the past many complaints at one time and another about smoke, about odours, and all the pollution in the air. As one would expect in a community of this kind, and I think in all fairness to the industrial establishments here in Cornwall, it should be said, a tremendous amount has been done in recent years to try to minimize the offensive nature of emissions of various types from these plants.

I think a part of our problem in the past with regard to air pollution has been that sometimes





some of the causes of it are located in areas which really are not suitable for the type of operation which they carry on. For instance, you may have a small industry in the area with a number of residences around it. I think our planning is taking some cognizance of that, and I think that is probably less troublesome now than it was perhaps twenty years ago.

I do not think that specifically I can say anything of very much value to this Committee. But I do feel that, representing the city of Cornwall, I should say officially, as counsel for the city, that certainly we will do everything we possibly can to co-operate with the work of this Committee, and we will also, if we can be of any assistance, do any type of liaison work between these people who are in our area and the Committee, so far as trying to implement any sensible suggestions for solutions of trouble.

I do not think there is anything more I can add which will be helpful, except that we do really feel that this Committee has the problem in hand, and that the work it is doing is a great step in the right direction. I appreciate your hearing me.

THE CHAIRMAN: Thank you, Mr. Stiles.



I wonder if you, as one who is officially here today, would care to give any reason why you do not have a local smoke abatement by-law in Cornwall. Have you considered it?

MR. STILES: Well, I do not know if I can answer that question, sir. There have been many requests in years gone by to one particular person or company, or something of that kind, to try to cut down on the emission of smoke. I suppose one of the reasons probably why we have not such a by-law is, first of all, that Councils are generally reluctant to interfere with the prosecution of any legitimate business; and certainly, I think it has been felt that it is extremely difficult to enforce these by-laws in some ways. They lead to a lot of trouble in attempting to give effective enforcement to them. Those may be two of the reasons.

Other than that, I do not know that I can give you an answer.

MR. MORNINGSTAR: You have a nuisance by-law, though, have you not?

MR. STILES: Yes, I think we have. But on this matter of the abatement of nuisances and the control of smoke, I think you are probably much better qualified than I am, to observe that it is a



very hard business to deal with effectively. At least, that is my own candid opinion.

THE CHAIRMAN: Well, that is a pretty good legal opinion, Mr. Stiles, is it not? Thank you very much, sir. I know you have other people in your office. Thank you for coming up.

MR. STILES: Thank you very much for hearing me.

THE CHAIRMAN: Mr. Adams, I wonder if I could ask you a question or two while you are aboard?

You have been very helpful to us around town today, and we do not want to put you on the spot, by any means, but we have found out what an important cog you are in the municipal wheel here, and that many things seem to come under your jurisdiction and control.

We have a\*petition here, signed by some of your citizens, against the Cornwall Brass Foundry Company, and I wondered if you knew whether this Cornwall Brass Foundry Company came under existing provincial legislation or not as to polluting the air?

MR. ADAMS: I do not think so. It has been in operation for about twenty-five years, I would say.

\* Please refer to page 3216.





It started out as a small, two-man concern, two brothers, quite a few years ago, and I do not think it has done very much. It grew a little larger during the war, and since the war.

THE CHAIRMAN: Has it got to be quite a plant now?

MR. ADAMS: No, I don't suppose they employ more than seven or eight men. They run a cupola, and they have a furnace, and cast iron.

MR. ELLIOTT: Do you have any complaints about them?

MR. ADAMS: Just in the fringe area around the little plant.

THE CHAIRMAN: As you know, there are certain exemptions under the provincial law now.

MR. ADAMS: That is right.

THE CHAIRMAN: Such as cement plants, brick concerns, and certain metallurgical organizations. I am not sure whether this brass foundry would be included or not.

MR. COVENTRY: My name is Coventry. This firm is trying to get a new site at the present time, to move away from that environment. They want to enlarge their plant to get into a place where they will not be obnoxious to anyone.



MR. ADAMS: If they are not going to offend anybody, they are going to have to go a long way north, are they not?

THE CHAIRMAN: Thank you, Mr. Adams. That is what I wanted to ask you.

Mr. Coventry, perhaps you would like to comment on this situation. As Industrial Commissioner, I know you are very familiar with these problems.

MR. COVENTRY: I thank you for the opportunity of addressing you; but I have been here only for about six months. We are, I believe, in the throes of a tremendous industrial development in this area. Naturally enough, we are going to see if we possibly can, that any industry moving into the area will at least not be where the wind will blow any obnoxious smoke into our nostrils.

Zoning by-laws have a great deal to do with what industry can come into an area, and I believe that a considerable amount of control can be exercised through these zoning by-laws.

They describe exactly what are obnoxious industries, and they indicate what industries will not be allowed into the light industry area; and there are some industries which we will not tolerate



in Cornwall, under the by-laws, even in the heavy industrial areas.

One of the things we have had to contend with is the fact that industry was located here many, many years ago, without any real study of exactly which way the wind blew, and if it had been placed on the east side instead of south and west, there would be very few complaints in Cornwall today.

We are fully cognizant of the need to have regulations which will make industry look after its own emissions, and here in Cornwall we are fortunate in having industry which has already taken the matter into its own hands.

DOCTOR EVIS (Secretary): I might suggest, when you attract new industry, it might be helpful to all concerned, if you suggest to them that, in building their plant, they should have provision for air pollution control equipment, for it is much cheaper to put it in originally, when you are building the plant, than to try to fit it in with a shoe horn later on.

MR. COVENTRY: Thank you. That is a very good suggestion indeed.

THE CHAIRMAN: Is there anyone else in the room who would like to address the Committee?



MR. FRANK M. ROBERTSON: We are manufacturers of heavy chemicals -- obviously a nasty business as far as the community is concerned if we do not take all the precautions which we should.

Over the years, we have attempted to do so. I think we have cut down our nuisance problem to a point where it is not too serious, but we do have occasional, irregular and rather indefinite problems in the community -- ones which we attempt to solve, and which we expect to solve, although they are very difficult.

With the chemical business, as I say, they are a type of thing which come irregularly.

To our way of thinking, the solving of the problem is not going to be done without experts, and we have quite a few around -- technical people -- but we have no claim to being experts on air pollution.

I think I would like to, in the main area, emphasize what Mr. Stephens, and, I think, Mr. Fennell, have said -- that this problem, as far as chemical plants are concerned, is one which should be handled by people with very broad experience in a very specialized field, in the air pollution field.

I think that is all I have to say.





THE CHAIRMAN: We know the chemical industry does have quite a problem. In our visit to Sarnia, we learned, what you know, of the good job they are doing there in the chemical industry: oil refineries and so on have done really an excellent job. Of course, Sarnia has an expanding industry, the same as you have in Cornwall.

I do believe that a citizens' committee, comprising members of local industry, acting in an advisory capacity, is invaluable to the local Council; and if you would not mind the Committee suggesting that right now, if you do not have a working Advisory Board here in Cornwall, it might be a good idea to give that some very serious thought and consideration. Because the people best able to cope with the problems of industry are the people in industry.

You have all said that here today. And the role of the government in the whole situation is simply to give a little leadership, and maybe to assist these companies and manufacturers and industries which maybe are not keeping up with the rest -- something of that nature.

I should like to commend that Advisory Board idea.



MR. ELLIOTT: We have that in Hamilton. The Chief Engineer of the Canadian Westinghouse, the chairman of the committee, took the responsibility completely off the City Council. The City Council does not have that problem at all.

The committee is doing a marvellous job in handling the situation for the citizens and for themselves in that city.

You have the engineers who know the job and its problems, who can explain it a lot better than the ordinary Aldermen or the ordinary "Joe" in City Council who is trying to get along in the world.

THE CHAIRMAN: Is there anybody else who would like to speak to the Committee?

ALDERMAN MACK: I should like to say one word more. You have heard what the large industries are doing, but the smaller ones, which have not the money to do it, are the ones which are often causing the most frustrating irritation in areas, and I think in your studies you have to look at this side as one group, and the others, smaller ones, who should get some assistance.

Probably the idea of having specialists from the larger industries would be a great help, but



how would it come in where you have schools, or hospitals, or other institutions, and who actually will not have a thing to do with it unless there is some way of getting assistance.

THE CHAIRMAN: Of course you will have to take up those problems with the Council, Alderman. They always take care of them.

ALDERMAN MACK: They are always left with the Council. They are very frustrating. We have as I said, people in my Ward who are suffering mainly from the smoke nuisance.

THE CHAIRMAN: You are quite right there, Alderman, that it is very, very definitely up to all levels of government, federal, provincial and municipal, school boards and allied organizations, to set the pace in dealing with this problem, because we do not expect that at the provincial level, the government is going to be putting down some pretty good legislation to effectively control this problem, and, at the same time, be contaminating the areas in which they have buildings. I know I speak for the members of the Committee when I say that the government has to be very active in this picture, too.

As a matter of fact, after we had been





studying the problem for several months, someone decided that we had better have a look at our own installations at Queen's Park, which we did, incidentally, and we toured the set-up there, and we were very pleased to see it was modern and up-to-date. I think we found that, in that regard, anyway, we were giving a little leadership.

Is there anything else, friends?

ALDERMAN J. VILLENEUVE: Here in the east end, we have been "blessed" in the last few years -- I do not know whether you would call it -- with waste of chemical in the air which has affected the paint on the dwellings.

It seems to come in showers, more or less. When it rains, with all the rain, the paint is almost wiped off the building; and I do not think there is anyone here knows yet what is causing that disruption. Mr. Adams was supposed to look into that. I don't know whether he did or not. It is especially bad in the east end, and the people down there are suffering considerable loss. It will not affect too much the new paint, it is the old paint; it nearly turns it into a powder.

THE CHAIRMAN: Have you discussed this problem with your Medical Officer of Health?



MR. ADAMS: No; it was brought up at City Council just a short time ago, and there were instructions to investigate the matter.

THE CHAIRMAN: He is going to report after the election; is that it?

MR. ADAMS: No, he will report it right now. We have had recently on two occasions southwest winds with lots of rain. An expert from Montreal examined some of this blistered paint. Nobody seemed to know what it was, but the consensus of opinion was, an acid blowing in this direction from some chemical plant over on the south side.

THE CHAIRMAN: That is the best one today! I think we can close the meeting on that happy note - that the worst features are from the south side of the river.

I think, if you had your Medical Officer of Health take a sample of that and send it to our Department of Health, they would be in a position to tell you what is in it, and maybe what to do about it. Send it up to our Sanitation Division.

If there is nothing else, ladies and gentlemen, we appreciate your presence and the



support and help you have given us this afternoon. I know that the many things we have learned will be of real assistance to us in coming to our final conclusions.

It is the hope of this Committee to submit some pretty final recommendations to the next regular Session of the Ontario Legislature.

Thank you very much for coming.

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---Whereupon the further proceedings of this Committee adjourned until Thursday, November 29th, 1956, to reconvene in the city of Montreal.

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APPEARANCES: (Continued from page 3166)

Mrs. Mack,	Alderman, City Council, Cornwall.
Mr. H. E. Mason,	Manager, Howard Smith Paper Mill.
Mr. S. E. Fennell,	Counsel, Howard Smith Paper Mill.
Dr. T. Tomlinson,	Director of Research, Howard Smith Paper Mill.
Mr. Hugh Stephens,	Executive Director, Kemball, Bishop & Co. (Canada) Ltd.
Mr. George A. Stiles,	City Solicitor, Cornwall.
Mr. Adams,	City Engineer, Cornwall.
Mr. W. G. Coventry,	Industrial Commissioner.
Mr. F. M. Robertson,	Plant Manager, Canadian Industries Limited, Cornwall.
Mr. J. Villeneuve,	Alderman, City Council, Cornwall.

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P E T I T I O N

His Worship,  
Members of City Council.

Dear Sirs:

We, the undersigned do hereby petition City Council to take action against the Cornwall Brass Foundry situated on Sixth Street East to remedy the smoke nuisance. Our laundry has been ruined by the smoke and we also pride ourselves in trying to keep the city beautiful by keeping our buildings well painted.

This is impossible on account of the smoke nuisance, and we rest assured that you will take action into this matter as soon as possible.

WITNESSES:

Charles W. Crump

Charles Leblanc

J. Price

James Ewart Thompson

Od. Villeneuve

Robert E. Robinson

Ernest Desjardins

Phil Beaudette

David Eamer

Robert McColl

Gerald Samson

Mrs. Jean Latour

John Merpaw

Mederio Queenville

George Le'ger

Etienne Leblanc

Ina Mortson

Alex Pilon

- - - - -





ONTARIO

P R O C E E D I N G S

of the

SELECT COMMITTEE APPOINTED BY THE ONTARIO LEGISLATURE  
TO ENQUIRE INTO CERTAIN MATTERS AND LEGISLATION  
REGARDING SMOKE CONTROL AND AIR POLLUTION IN ONTARIO.

Mr. A. H. Cowling, Chairman,  
Dr. F. A. Evis, Secretary.

- - - - -

VOLUME XLII

Thursday, November 29th, 1956,

MONTREAL, P. Que.

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R. C. Sturgeon,  
Official Reporter,  
Parliament Buildings,  
Toronto, Ontario.



F O R T Y - S E C O N D   D A Y

Montreal, Que.,  
Thursday, November 29th, 1956,  
11:00 o'clock, am.

- - - -

The further proceedings of this Committee  
reconvened pursuant to adjournment.

Mr. A. H. Cowling, Chairman,  
Presiding.

PRESENT:

Messrs. Elliott,  
Morningstar,  
Murdoch,  
Macaulay, Q.C.,  
Gordon,  
Thomas (Oshawa)

Mr. Harry Belyea, Acting Secretary.

APPEARANCES:

Mr. T. R. McLagan,      President, Canada  
Steamship Lines Limited.

- - -

---The following proceedings were held in Suite 5081,  
Mount Royal Hotel, Montreal, Quebec:

THE CHAIRMAN: Well, Mr. McLagan, I think  
perhaps I had better tell you what we are doing. It  
was very nice of you to come over here today.





In March, 1955, the Ontario Legislature set up a Select Committee to study and report on matters of air pollution and smoke control in Ontario.

Then we had an election in June, 1955, and we were re-appointed in September, and have been working on the problem ever since.

This is an all-Party Committee, and we feel, as I know you do, that the matter of air pollution and smoke control transcends Party lines.

One of the problems we found in going about Ontario has to do with coal-burning steamships. Naturally, your Company is the largest of all in the province, or passing through the province, and we thought we would like to discuss the matter with you, and tell you some of the things we have learned, in speaking with various people, and perhaps receive some of your views in regard to the situation.

MR. McLAGAN: I will be very glad to do all I can.

T. R. M c L A G A N

President, Canada Steamship Lines Limited, appearing before the Committee, but not being sworn, deposes and says:

BY THE CHAIRMAN:

Q. Would you proceed in your own way, Mr.



McLagan, and, if you do not mind, if any questions occur to any members of the Committee, they may be asked while you are speaking, if that will be satisfactory to you.

A. That is perfectly all right.

Most of this smoke will disappear when the Seaway is completed, because most of the trouble is with the old, coal-burning ships, and most of them will disappear -- the most of them.

Q. Why is that?

A. Because they will not be economical to operate. I believe that 90 percent. of these ships, which we call "canalers" which are built, negotiate the St. Lawrence River canals, and they will practically completely disappear.

The new ships which have been built by ourselves are dieselized, so there is no smoke pollution from them, and the larger ships which have been built are oil-burning turbine ships, and there is little or no smoke from them, and some of the other medium-sized vessels have had automatic stokers put in them, and the smoke from them has been considerably reduced.

Most offenders are the old, small, coal-burning ships.

Q. Do you still have some of them?



A. Yes. We cannot get rid of them, because they take the grain down from the transfer points at Port Colborne, and Kingston.

When the Seaway is completed, the larger ships will be enabled to come on up to Montreal.

Then we have what we call "package freight". We just built a new ship, the "Fort Henry", which is an oil-burner turbine ship, and it will take the place of three of the former type of ships.

When the Seaway goes through, that ship will come beyond Montreal, and where we have 21 ships to do the work, we will only have seven to do the same work. So the smoke will automatically be reduced radically.

There is not too much you can do with the smaller ships, except make the engineers be as careful as they can.

The larger ships will have automatic stokers, which will reduce the smoke, but it is difficult to put automatic stokers on the smaller ships, but they will be gone anyway, in a couple of years.

BY MR. ELLIOTT:

Q. You think you will be out of them in a couple of years?

A. Ships come down here carrying 107,000



bushels of grain now, and the larger ships will carry around 600,000 bushels. So one large ship will replace six of the smaller ones.

We will have another large ship in 1958, and a much bigger one in the spring of 1959, and I feel there will be very little work for these smaller ships, not on account of the smoke pollution, but because the labour costs are so prohibitive.

The ships we have built for that freight have no smoke pollution at all, because they are all dieselized, and they only burn about one-third of the fuel per day, and we have also very many less people on them.

Q. In the normal course of efficiency, they will be eliminated?

A. They will be eliminated, because we cannot keep pace with the labour costs. We are paying deck hands now \$284.00 a month, outside of overtime, and there is no way we can dispense with these ships at the present time, because of their length and width going through the canal. They have a width of 44 feet, and a depth of 28 feet.

Q. Will the old ones be put on the scrap heap to be broken up?

A. I do not know where else they will go.





There will be a few of the good ones left, and they will be dieselized.

I am debating now whether we should not go to work and build another one right away. These new dieselized ships take about 600,000 bushels of wheat down, as against about 85,000 in the older ones. We cannot dieselize them, because they are larger engines, and it requires a much larger engine room.

BY THE CHAIRMAN:

Q. How many ships have you on the Great Lakes?

A. On the Great Lakes and the canals, we have about 59, and we figure we will be able to do the same work with about 28 units.

Q. What is the next company in nearest competition to you?

A. I think it is the Misener.

Q. How many have they? Fifteen or twenty?

A. I think more than that. He has about twenty-seven of those about which I am speaking.

BY MR. MURDOCH:

Q. Has the Colonial Steamship Line any vessels?

A. Yes.

BY MR. THOMAS (Oshawa):

Q. Have you any idea what their programme might be?



A. No.

THE CHAIRMAN: Mr. Murdoch lives down on the Detroit River, and perhaps the President could answer his question about the ships shooting out the smoke.

MR. MURDOCH: I was rather amazed the other day. There was a ship going up, and it was belching a terrific amount of black smoke. I went away from the window for a moment, and came back, and there was not a wisp of smoke showing.

THE WITNESS: He was cleaning up the fire, or something. It is a question of where you do it; sometimes these fellows are under-stoking, but with the Seaway coming through, in my judgment, a good part of your difficulties will be overcome.

BY THE CHAIRMAN:

Q. Are you operating under any Federal law, or any law at all, as far as smoke is concerned? Are you responsible to anybody at all?

A. Primarily, we operate under the Federal laws. We operate under the Federal laws, and for labour under the provincial laws.

Q. The railways, as you know, operate under the Board of Transport Commissioners, by virtue of a Federal law dated 1908, --



A. Curiously enough, the package freighters operate under the Board of Transport Commissioners. That is another way of calling it "general freight".

Q. Is that you?

A. We operate that way.

BY MR. ELLIOTT:

Q. They are the ones which call in and out of Hamilton?

A. Yes. We operate twenty ships, and I figure we can do the same work with seven of the new ships.

One is new, and another is being built at Collingwood now. They are turbine oil-burning ships, and there is no smoke from them.

BY THE CHAIRMAN:

Q. Do you think your ships, in the next three or four years, or until such time as the Seaway is completed, could co-operate with the local smoke abatement officer?

A. Yes, we get reports on that. They come from Detroit. The various officials will pass by, and will give us the names, what they are doing, and so on, and that is all.

Q. That is, reports of smoke performance applying on the Detroit River?

A. Yes, and we get reports from the others, too.





The best way to do is to make it impossible to have much smoke; otherwise, you have to police the people running the ships, and you get reports, and go after them.

That even applies to ships coming across the Atlantic. There is not much smoke, but they have a couple who may be belching it out, but it is something with their flues, or fires, or something.

Q. Is it possible in the Toronto Harbour, for instance, -- I am passing there every day -- very often you see ships belching out smoke. Could that be done out in the lake, about a mile?

A. That is when they are docking and undocking. You do not have any trouble with the diesels. The trouble is with the coal-burning ships.

It is actually cheaper to operate a coal-burning ship than an oil-burning ship, with the same power plant.

I have always felt that eventually the price of oil will come down, and the price of coal will go up, but it really has not happened yet, except you get rid of some human beings on the ships, which, with modern labour practices, is worth something. There are that many less people to raise Hell about something.



BY MR. BELYEA:

Q. Do your ships come under the rules of the various Harbour Commissioners?

A. I think we come under any rules they have. Of course, all the rules they have, have to be tempered with practicality, and we have steadily pursued a course in our own Company of constantly improving the older ships, and building new ships, which emit no smoke.

I have been here only five years, and we have been building over \$25 million worth of new ships, and they have all been diesel, or automatic turbines, or fitted with automatic stokers.

On the 13,000-ton or 15,000-ton ships, they have automatic stokers, and that reduces the smoke.

BY MR. MACAULAY, Q.C.:

Q. How many ships with automatic stokers have you?

A. I think we have seventeen big ships up there now. I would think, out of those, we would have about twelve altogether with automatic stokers, oil-fired, and you do not have the smoke pollution.

Q. Is oil the same as diesels?

A. No, the diesel is an internal combustion engine. It is like an automobile or truck.



BY THE CHAIRMAN.

Q. All the new ones have diesel or oil?

A. They will have both.

Q. How do they "stack up", smoke-wise?

BY MR. MACAULAY, Q.C.:

Q. Did I understand you to say there are twelve automatic stokers?

A. Out of the fleet, we have twelve oil-fired ships, in the fleet.

Q. Therefore, how many of the twelve would have stokers? Do you know?

A. I would think about eight. I am speaking "off the cuff". I would think around eight.

Q. Are those old ships or comparatively new? Is it your plan, in any way, to dispense with those?

A. We have plans to build \$40 million worth of ships. You cannot build \$40 million worth of ships in one year.

Q. How many have you built now?

A. We have two built now.

Q. And <sup>of</sup> those six or seven ships which will take the place of these canalers, two are now being built?

A. We have another three which cannot come to Montreal now. That is five, "right off the bat".

As far as we are concerned, we get rid of



the small ships as fast as we can.

BY MR. ELLIOTT:

Q. The coal burners?

A. Yes, because of lack of efficiency of operation, as they do not carry enough. We have had two years with new ships now, and they will do the work of three or four of the other ships. They are not bigger, but faster.

BY MR. MORNINGSTAR:

Q. You are saying you kill two birds with one stone?

A. Either that, or go out of business. We have to compete with the railways and the trucks.

You fellows do not realize that the St. Lawrence Seaway may increase the cost of transportation in Ontario. They are talking about putting in new tolls. The first thing you know, there will be no water transportation at all in Ontario.

BY THE CHAIRMAN:

Q. You think that is right?

A. I see they are advocating a \$6.00 rate on general cargo. Our freight rate is a little more than that. If they do that, you would not have any smoke pollution at all, because they would not operate. I am building a truckers' terminal here on Cote de Liese,





and if they put the rate too high, we will ship by truck.

I do not think the people know what is going on with the St. Lawrence Seaway.

They are speaking about a toll of 50 cents a ton, and yet we compete with one another, and fight over 5 cents.

And I understand they are going to put a toll on the Welland Canal, and that will raise the cost of transportation.

The return on these ships now on capital is about 3 percent. or 4 percent.

BY MR. MACAULAY, Q.C.:

Q. It is not as if there ~~was~~no alternative route, and you could pass it on to the consumers.

A. There is no alternative route.

Q. They can carry it in by rail?

A. They cannot carry ore by rail.

Q. It would not stop all the ships?

A. No, but it would raise the cost of carrying the stuff, and all that; not cheapen it.

You can see the building of the Seaway will make the ore from Seven Islands cheaper, because there is practically nothing flowing now, only a couple of million tons, taken in their own ships.



But the cost of ore will go up, by virtue of the Seaway.

BY MR. ELLIOTT:

Q. And coal as well?

A. Yes.

BY MR. MORNINGSTAR:

Q. And possibly steel?

A. Yes.

BY THE CHAIRMAN:

Q. How many boats will you have on that ore proposition?

A. We have had about fourteen or fifteen on ore and coal.

Q. To Seven Islands?

A. Oh, no, not to Seven Islands; from Duluth down. I do not know what Seven Islands will be. Nobody knows, because nobody knows how the total freight rate, plus the tolls, will compare with those up around the Atlantic seaboard to Philadelphia, Baltimore and so forth, as it is going now.

But it is quite evident the ore from Duluth to Cleveland or Hamilton will have a lower freight rate than from Seven Islands up.

Q. As far as Ontario is concerned, have you had complaints from people from time to time, or from the



authorities in Toronto or Hamilton?

A. No, we have had some complaints from some irate citizens who have seen what Mr. Murdoch said he saw, that is, some boats belching smoke, and if we can get the names of the ships, we write letters to them.

Q. Would you like to comment on the Windsor situation, where the local people imposed a fine on a ship which was sending out smoke when docked?

A. I do not remember it. I never heard of it.

Q. They paid a fine for a smoke offence.

A. I think the offences should be fined, provided the offences are controllable.

Q. In other words, if it was due to the carelessness of the operator?

A. We will always have carelessness, -- partly carelessness and partly the conditions.

Q. We get careless ourselves once in awhile.

A. You see the railways going by smoking up the place, and now with the diesels, it is noise instead of smoke. I do not know where it will end.

BY MR. BELYEA:

Q. Are there not a couple of Associations connected with ships, and will you tell us what they do?





A. The one which deals with those matters here would be the one called the "Dominion Marine".

Q. I would like to know what they are doing, and your connection with them.

A. As far as that is concerned, they meet once a year at the Seignory Club, and have a good time. It is against the law to combine in Canada, and the inland shipping people are their competitors.

Q. It is an Association of shipping companies?

A. Yes.

BY THE CHAIRMAN:

Q. Sort of a loose-jointed affair?

A. Yes, it is a loose-jointed affair, but they have a manager, who is a lawyer, and I think it could be made a force for good, if these fellows were able to meet you gentlemen, for instance, to interpret what you have, and so on, and so forth.

BY MR. BELYEA:

Q. There is a member of the Dominion Marine Association in Toronto who has been active in the Great Lakes Air Pollution Association.

A. I have not met him. They have a committee, as far as I know, but you know there has been a great deal of work done by the companies.

I do not know about the others, but by our



Company, mainly in securing better equipment, because when securing better equipment, we benefit ourselves, as when you see a great deal of stuff going up the stacks, you see a great deal of money going up the stacks also.

When I first came with the Canada Steamship Lines five years ago, I saw pictures of ships belching as much smoke as they could. I said, "We will take those down and put up pictures which do not show that we are sending so much carbon up the stacks".

BY MR. ELLIOTT:

Q. You really admit you were a bad smoke offender , five years ago?

A. To me, putting advertising out showing your vessels wasting as much as possible, is the wrong idea.

Q. In the Detroit area, you were the only Company criticized.

A. Perhaps because we are the largest. I will say that. I am prepared to defend myself.

BY MR. MURDOCH:

Q. There is a Lake Carrier Association?

A. Yes, in Cleveland. It is an American Association, and they have another one, The Association of Lake Carriers. It is the same as the Dominion Marine,



but was formed for the purpose of industrial collective bargaining.

BY THE CHAIRMAN:

Q. Where is the largest dock for your ships, in Toronto, Hamilton, or Port Arthur?

A. Hamilton is the big one.

BY MR. ELLIOTT:

Q. You handle the Dominion Foundries, and the Steel Company?

A. No, just the Steel Company.

Q. You do not handle the Foundries?

A. No.

Q. Who does?

A. Mr. Gordon Leach owns the foundry.

Q. I have noticed your ships there.

A. Their ships are painted black and ours are painted red.

I have always felt we should have more diesels and diesel oil stations on the Great Lakes. Furthermore, when we get up to a certain power -- and any ships we are building, take 8500 horsepower, -- we get into these large, heavy diesels. There are no really heavy diesels made in America. They come in from Denmark, and I was about to sign a contract, but they would not guarantee that they would not "kick out"



when the ship went into the Lakes. So we went into turbines. They have high-speed diesel engines which run at about 750 revolutions, and they have to be geared down to the propeller, which might be 150.

The diesel engines had no gear at all. They are directly connected to the shafts.

That is why we have gone to turbines, and I am hoping when the Seaway is through, we will have medium-sized ships, and we will then get the diesels.

There again you may get into trouble from getting into the oxides. If you go to that medium, you may run into the diesel oxides coming into shore, and if you get slag on these diesels, you have to scrape it off.

BY THE CHAIRMAN:

Q. Would that be polluting the water?

A. If you look, there is just a solid gas coming out.

BY MR. MURDOCH:

Q. You said you are quite conscious of the waste through improper firing and the smoke belching out?

A. I would say we are.

Q. How do you look after that? Do you do any checks on ships, and submit a carbon copy to head office?





A. We have a complete metering device upon the new ships, so we have a power plant on the ship, the same as you would have on land, for instance, at the Ontario Hydro, where they have a meter for metering fuel into the boilers, and these steam-valve meters measure the steam going to the engines, and the auxiliaries, and they have a torsion meter on the shaft, which measures the horsepower.

So you fellows will know the situation, I went up on one of the ships of the Canadian Oil Company one day to buy some oil, and I said to the captain, "Why do you not fuel at your place in Sarnia?", and he said, "We fuel at different places". I said, "Why not fuel at a dock; I do not see why we cannot get that oil in Canada".

Then I said, "How much did you take?", and he showed me, and I said, "How much do you pay for it?", and he said, "I do not know". I said, "You are the chief engineer, and you should know".

Then I called a fellow in from the station at which he was buying the oil, and I said, "What does he pay for this oil?", and the chap said, "I do not know", and I said, "Is the manager here?", and he said, "He is in his office", so I called him up and I said, "I am down here with <sup>an</sup> 18,000-ton ship, and I



am trying to find out what we are paying for oil", and he said, "I am sorry, but I cannot help you. I do not know".

So I came back to Montreal and wrote to the President of the Company, and that is how I found out how much it was costing us.

I told them I thought the chief engineer should know how much they were paying.

BY MR. MORNINGSTAR:

Q. They must have been giving you a special price.

A. Yes. You can imagine the special price you get from an oil company.

BY MR. MURDOCH:

Q. We have found, with regard to the railroads, some places where the municipalities have a real programme, and they issue instructions which are given to all the men doing the firing, and then they have a method of seeing that the persons concerned really read the instructions, and then they have some check to make sure they are carrying them out.

I will admit it does depend on where there is a programme of real smoke control on the railroad, by which they are obtaining results.

In other places, perhaps, where the same



control is not exercised, they are just wasting smoke.

A. The more smoke we have, the more it costs us. We do not want to spend any more than we have to.

The old-fashioned coal burning ships used about eight and one-half pounds per horsepower per hour, and turbines are using about 6.5 pounds of fuel per hour, and the diesels use about 4.4 pounds per horsepower per hour, and that is the thing in which we are interested. The diesels will burn about half.

When we first started using the diesels, the captain said they could not run the turbine ships in the Great Lakes.

BY THE CHAIRMAN:

Q. Why?

A. They said they could not maneuver them. I called them in, and I said, "We just cannot run the Company and burn twice as much fuel as we should, and we just must run them". Now they do not want to run anything else. They seem to have more power when they go astern, and they can maneuver much better.

Q. Have you anybody working full time on this smoke?

A. We have four of them. We call them "marine engineers". Their job is to keep the machinery in the





ships functioning properly, and keep the fuel costs down.

The smoke control and fuel costs go hand in hand, directly proportional. If you do not have the smoke going up the stack, you do not burn so much fuel, so if any of our ships are belching smoke around, it is costing us money, and that is what we do not want.

Naturally, we cannot have an inspector on each ship, but as we build new ships, and secure better methods of checking them, there undoubtedly will be some improvement, and we have put these devices on, and we now secure monthly reports of the amount of fuel they burn per day per mile.

BY MR. ELLIOTT:

Q. You think that buying new ships with the late equipment is cheaper than putting the new equipment into the old ships to eliminate the smoke?

A. It all depends on what you mean by "new equipment". If you change them to oil-burning, that is one thing; if you put stokers on, and scrap them all, by taking the old engines out of the boilers, that is a matter of about \$1 million for ships of 12,000 to 14,000 tons.

Q. It pays to put in new equipment, rather than scrap the old?



A. It all depends. You are faced with the problem constantly amongst the 10,000 or 12,000-ton ships, whether to put in new equipment or scrap them and build 22,000 or 25,000-ton ships.

I think we feel that a 23,000-ton or a 25,000-ton is too large, and we have sort of compromised on a 22,500-ton vessel, but we will make them 25,000 tons, if we find it is required.

Q. You think the old ones should be scrapped?

A. I think they might be, for several reasons. With the 25,000-ton vessels, we can do the work of quite a number of smaller ones, and we will have to build some new units to meet the demands which are made upon us.

BY MR. BELYEA:

Q. Do your ships call in American ports?

A. Yes.

Q. They have by-laws there?

A. I do not know. I have never heard of them. I have never had any complaints from them.

BY THE CHAIRMAN:

Q. You can only operate in Canadian ports?

A. We can only operate internationally. The American Coast Law allows our ships to run on their coasts.



If one of our ships is going from Fort William to Chicago, we can do that. We cannot go from an American port to an American port.

BY MR. ELLIOTT:

Q. You have to go from a Canadian port to an American port, or from an American port to a Canadian port?

A. Yes, but the British Shipping Act does not make that provision. They can come and operate independently.

In the meantime, the British ships are travelling from Seven Islands to Contracoeur, and they are paying their men from \$75.00 to \$80.00 per month. There is a big difference there between that, and what we are paying.

Of course, we have no jurisdiction over the British seamen, and the unions' reply is that if we have no jurisdiction in Canada, then they can take the British seamen and put them in jail for going on strike.

BY THE CHAIRMAN:

Q. You are paying seamen \$284.00 per month?

A. Yes, plus over-time.

THE CHAIRMAN: That seems like pretty big money.

BY MR. MURDOCH:

Q. Of course, you feed them, too?



A. They are fed as well. There is no use begging that. You have to get better units, and you have to pay the men what they are getting in Canada today.

The union's attitude is that the men are entitled to receive as much money as a wiper receives in a paper mill, or a ditch digger in Montreal, and there is no use arguing about that.

BY THE CHAIRMAN:

Q. Have they a good smoke by-law in Montreal?

A. I do not know; I cannot tell you.

Q. You never had any complaints from this harbour?

A. No. I never heard of any, nor I never noticed an undue amount of smoke.

There again, the ocean ships have been using the diesels, and there are also oil-burning ships.

BY MR. MACAULAY, Q.C.:

Q. How far up the canals do your ships come? Do they go between Prescott and Montreal?

A. No, some go to the head of the lakes.

Q. What about your automatic stokers? Are they highly successful? Mr. Belyea, can you answer that?





MR. BELYEA: Yes.

THE WITNESS: Yes, and while you spend quite a bit of money, you save in labour costs.

BY MR. MACAULAY, Q.C.:

Q. That consists of automatic feeding?

A. Yes.

Q. Or what does it consist of?

A. It gives a more constant feed, and the coal men can get better combustion, and thus save fuel.

BY MR. THOMAS (Oshawa):

Q. And less smoke?

A. Yes.

BY MR. MACAULAY, Q.C.:

Q. What I meant was, are these things satisfactory basically -- the feeding system -- or do they just save on the fuel consumption?

A. It comes in the same group, because they are fed in a more scientific way than by a fellow shovelling the coal in.

Q. What about blowing it out of your stacks?

A. We do not want them to blow them out, around the cities.

Q. Have you any regulations about that?

A. Yes, we have regulations about that.



Q. What do they provide?

A. They provide they are not to do it while they are in a thickly-populated area.

Q. Have you anything which says they cannot do it, for instance, in the harbour at Hamilton?

A. That I cannot tell you -- what they cannot do. There are certain things they have to do, particularly when docking and undocking.

Q. Are you not able to operate the engines in such a way that that will be done before you get into a dock --

A. No, not on the old ships.

BY THE CHAIRMAN:

Q. If the time arrives to make it necessary, they have to give them a blast?

A. Yes.

BY MR. MACAULAY, Q.C.:

Q. Surely it is not as unpredictable as a baby wetting his diapers? There must be some control on that.

A. I can say it is not as unpredictable as that. I do not think it is very bad, but we try to minimize it. We watch it very carefully.

BY THE CHAIRMAN:

Q. I think we are prepared to say it is not bad --



A. We did not take stock of it, I do not think, but now we are giving it some consideration, because the price of fuel is going up all the time.

BY MR. ELLIOTT:

Q. I think Hamilton is your largest one and this Steel Company is your largest customer, but I have never had any complaints.

A. The big ships are going there now.

Q. With the package freight and these railways, the old ships are going in?

A. The new ships are going in. There is no smoke there. There is more smoke from the steel company in Hamilton than anywhere else. I go there quite a number of times every year, and the smoke from the steel company is very hard to breathe.

BY THE CHAIRMAN:

Q. What about the Welland situation?

MR. MORNINGSTAR: They get some smoke; it is not too bad.

BY MR. MORNINGSTAR:

Q. I suppose you know we have the Electro Metallurgical in Welland?

A. No, I do not think I do. It is well to consider the special problem in Welland. They will have a big problem on their hands.





They are only single locks, and despite anything we can do, they have to use the single locks in passing through. I think there is one uptown, and one downtown.

BY THE CHAIRMAN:

Q. With these new locks, there will be only a one-way traffic?

A. Yes.

Q. Why?

A. They do not want to spend the extra money.

Q. Would that double the amount of money?

A. Oh, no; it would double the number of locks.

BY MR. ELLIOTT:

Q. They could go through faster?

A. Yes.

BY MR. MORNINGSTAR:

Q. It is like our town.

A. The type of vessels going through the Welland Canal, are not too large, but they carry over 19 million tons going through per year, and it has been said when the Seaway is built and finished, there will be over 50 million tons. My prediction is, the Welland Canal will come to a complete stop.

BY THE CHAIRMAN:

Q. They will be lined up waiting to go through?



A. Some of our ships have had to wait as long as five hours to get into the canal.

Q. With the one-way traffic, they just come down to the end and wait their turn?

A. That is right.

Q. They are going now at a rate of 19 million tons, and you say they may have up to 50 million tons?

A. Yes. I go around making speeches about it.

BY MR. MACAULAY, Q.C.:

Q. This year, the way it is going, it will amount to about 120 million tons?

A. 130 million tons.

Q. So your estimate of 50 million tons is not necessarily high by any means?

A. Oh, I think it is.

Q. You probably misunderstood me. 50 million tons is a reality?

A. I think it is too much.

Q. But you think it is a reality, that it is perhaps possible that 50 million tons will likely shut the locks down altogether from overcrowding.

A. That is what they say. If there are 50 million tons trying to be shoved through the canal, it will come to a full stop. It will be mostly bulk products.



As you know, the iron ore -- there is much money spent on the Mesabi Range for beneficiation, that is, more than except on Seven Islands.

I was there and asked them how long they expected to be carrying ore out of Duluth, and they said about a hundred years. So I think the ore shipped from there will be cheaper than from elsewhere.

BY THE CHAIRMAN:

Q. What is the objection to the two-way deal?

A. Frankly, I do not know. We have been carrying on a fight with hon. Mr. Chevrier, but they will not listen to us. I think it is a terrible mistake.

BY MR. ELLIOTT:

Q. It may mean building a new canal?

A. They have twin locks in the center, but at either end they have single locks, and yet the Soo has more tonnage going through than through the Panama and the Suez Canals combined.

BY MR. MACAULAY, Q.C.:

Q. And that is an eight-month period?

A. Yes, and as one ship goes up, another ship goes the other way. It is marvellous movement. Of course, they all go on the American side.



BY THE CHAIRMAN:

Q. Why?

A. Because the Canadian side is too small.

Q. Will it be enlarged with the completion of the Seaway?

A. No.

BY MR. ELLIOTT:

Q. Do you pay a toll?

A. No.

Q. There is no toll on the Canadian side now?

A. I do not think anything but Canadian and American ships can go through the canal now. No British ships can go through.

Q. That is a matter of policy?

A. No, a defense matter. As a matter of fact, it is very well guarded with anti-aircraft, because if it stops, everything stops. It is well patrolled.

BY THE CHAIRMAN:

Q. That is one of the largest on the North American continent?

A. Yes, that and the Welland Canal.

I have been over to NATO with about forty Canadian business men, where we met General Gunther.

---The following proceedings, while reported, were not transcribed, for security reasons.





THE CHAIRMAN: It was very nice of you to come here, Mr. McLagan, and talk to our group, and we have received a great deal of information.

If you can lunch with us, we will be honoured to have you.

THE WITNESS: I am afraid I have to get back to my office. I have to go to the Soo tonight, and we are very interested in building one of the larger ships in this country.

BY THE CHAIRMAN:

Q. Where will you build this big one?

A. At Quebec. A year ago, a great portion of our shipyard was burned down and it burned nineteen buildings, so we are erecting one large building instead of the 'nineteen. We really have a fine place there now. We have two 30,000-ton ocean-going ships, and we are going to build this 40,000-ton one.

BY MR. ELLIOTT:

Q. Could you build them in Collingwood or Hamilton?

A. We could not get them out.

Q. The ocean-going ships would not come down the regular canals?

A. They will be larger than the new canal will allow. The new canal will limit ocean-going ships to



about 16,000 tons.

Lake ships of about 25,000 tons can be carried, because they are longer and narrower. The locks are only about 80 feet wide, and if we got them too large, the waves would break them in two.

They are probably the most efficient bulk carriers in the world, and the captains handle them very well, and they really are fine ships.

So if anybody has a complaint about the smoke nuisance from our ships, we will be glad to receive notice about it, because we are afraid of losing money, just as much as the people dislike being annoyed.

If you see any pictures of our ships around now, you will not see any belching smoke.

THE CHAIRMAN: Once again, on behalf of the Committee, I wish to thank you for coming over.

---The witness retired.

THE CHAIRMAN: If there is nothing further, this meeting is adjourned.

- - - -

---Whereupon at 11:40 o'clock, a.m., the further proceedings of this Committee adjourned until Friday, November 30th, 1956, at 10:15 o'clock, a.m.

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P R O C E E D I N G S

of the

SELECT COMMITTEE APPOINTED BY THE ONTARIO LEGISLATURE  
TO ENQUIRE INTO CERTAIN MATTERS AND LEGISLATION  
REGARDING SMOKE CONTROL AND AIR POLLUTION IN ONTARIO.

Mr. A. H. Cowling,      Chairman,  
Dr. F. A. Evis,          Secretary.

- - - - -

VOLUME    XLIII

Friday, November 30th, 1956,

MONTREAL, P. Que.

- - - - -

R. C. Sturgeon,  
Official Reporter,  
Parliament Buildings,  
Toronto, Ontario.





E R R A T A

Volume XXXV

Page 2656

Change name of

Chairman from

"J. P. Robarts, Q.C."

to

"A. H. Cowling".

- - - - -



F O R T Y - T H I R D     D A Y

Montreal, P.Q.,  
Friday, November 30th, 1956,  
10:15 o'clock, a.m.

- - - -

The further proceedings of this Committee reconvened pursuant to adjournment.

Mr. A. H. Cowling, Chairman,  
Presiding.

PRESENT:

Messrs. Morningstar,

Elliott,

Murdoch,

Macaulay, Q.C.,

Gordon,

Mr. Harry Belyea, Acting Secretary.

APPEARANCES:

Mr. Donald Gordon,	President, Canadian National Railways.
Mr. S. F. Dingle,	Vice-President, Canadian National Railways.
Mr. R. T. Vaughan,	Special Assistant to President, Canadian National Railways.
Mr. W. M. Armstrong,	Assistant to Vice-President (Research and Development) Canadian National Railways.



Mr. E. Wynne,

Chief of Motor Power and  
Car Equipment, Canadian  
National Railways.

- - - - -

---The following proceedings were held in the Board  
Room, Canadian National Railway, 360 McGill Street,  
Montreal, P.Q.

- - - - -

D O N A L D       G O R D O N ,

President, Canadian National Railways, appearing  
before the Committee, but not being sworn, deposes  
and says:

BY THE CHAIRMAN:

Q.        President Gordon, we would be more than  
delighted to hear anything you have to say.        We  
appreciate your coming this morning to talk to us,  
and we would be very glad to hear from you at this time.

A.        Mr. Chairman and gentlemen; I would like  
to say, first of all, that I am very sorry that a  
former engagement with you for eleven o'clock had to  
be changed at the last moment, and I appreciate your  
coming a little earlier.

I do not make appointments to break them,  
as a general course, but this is a rather special  
matter, and that is why I asked if you could meet my



convenience and come a little earlier.

However, I hope we can proceed in the way we had planned. Will you tell me how you would like to proceed? Would you like me to make some references to the interim report, and discuss some of the details?

Q. You know our job, Mr. President. Perhaps I should say, briefly, what we are doing, why we are here, and then have you take it from there with a discussion on any pertinent matters which occur to you. Will that be satisfactory?

A. That is fine.

Q. Perhaps I should say, as you probably know, this is a Select Committee of the Ontario Legislature, composed of representatives of all Parties in the House.

We were first set up in March, 1955, but before we really got into the business, there was a provincial election in June, 1955.

We were re-constituted in September of last year, and have been pretty busy since that time, visiting all the larger centres in Ontario, and a great many across the line, in the United States.

We are to study all matters of air pollution and smoke control in all of its many phases, and report





to the Legislature, and make recommendations, or draft proposed legislation, to do something about this increasing problem in our province.

One of the main complaints we have received throughout our visits in Ontario is the complaint against the railroads, naturally.

We have spoken with the hon. Minister of Transport, hon. Mr. Marler, and with the Board of Transport Commissioners, and we thought it would be nice to discuss the problem with the Presidents of the two railways. After all, they are the men who have all the answers, insofar as the railroads are concerned.

We, in turn, appreciate the opportunity of discussing the matters with you, and your taking of your time to visit with our Committee.

Roughly, that is the picture as at the present time.

A. I want to say at once that both by reason of the calibre of the Committee, and the manner in which you have attacked this problem, it is perfectly clear you are having a very serious look at it. I want to assure you that we, also, are in full sympathy with the objectives which are before us in connection with the control of air pollution, both as citizens of



Canada, and as responsible business people, and we fully appreciate in our modern conditions of health, that the subject of air pollution is becoming more and more serious.

Having said that, however, I do want to say at once, that we, in the railroad business, feel we are the leaders in trying to control the emissions of smoke and other air pollution; that we are the leaders in these subjects, rather than lagging behind. Indeed, I would say, offhand, that if you have found in your investigations that other types of industry have done as much thinking, and have taken as many practical steps as the railroad business has in this particular field, your problem would not be as serious as you find it today.

Therefore, I suggest to you, you need very little else but sound, common sense.

I observe this (indicating) is an interim report, and I assume you want to view these matters as objectively and clearly as you can, and I would suggest you consider whether other industries have taken as hard a look at this as the railways have done.

Needless to say, that is not intended as an alibi; it is directing your attention to what we believe to be a fact.



You have had a good look at this problem, and you must accept this to be a long-range cure; it is not something which can be solved over night. It has been a long time growing up, and, with the intensification of industrialization in this country, there is a period of time when we will have to accept certain handicaps with it.

On the other hand, we feel that new techniques and new methods are lying upon business generally, and there are more opportunities to utilize technical corrective methods, than there have been in the past.

Turning again to the railways for a moment-- and this has always impressed us--we know, from practical tests we have made ourselves, that the railways have been made the obvious target, and for many reasons. One is that our emission of smoke is a more dramatic emission; it can be readily seen; every "kid" on the street likes to see a locomotive puffing along; and people are inclined to attribute all the smoke in a given area to the locomotives, which are puffing up and down at the time. We know, from careful tests, that is not so, and that the percentage of smoke emissions from the railways is small in a given area -- that is, comparatively small -- and as you probably know, smoke tends to form a sort of cloud, and, under





certain conditions, will lie there, and seeing that situation, and seeing the movement of the locomotives, assumptions are drawn which are not warranted by scientific tests.

We are prepared to prove that later. We do not do this as an emotional gesture; we are prepared to demonstrate, if given the opportunity, that that is the actual case.

Moreover, with the movement of the locomotives, the smoke will be discharged faster, than it would from a stationary plant of some kind.

However, having said that, I want to touch on some of the highlights of what we have done in the matter of smoke abatement, quite frankly, with the idea of impressing you with our seriousness. I am saying these things deliberately, to call your attention to the fact that we have taken a serious attitude toward this subject, and are not, in any way, to be charged with irresponsibility.

Our officers can give you much better details than I, and if you are willing to take the time with our special committee for further examination, we will be glad to demonstrate to you both what we have done, and what we think can be done in this matter, and what we intend for the future.



You may or may not know that every locomotive terminal of the Canadian National Railway is under the direct control of a mechanical department supervisor. That mechanical supervisor is a senior man, and included amongst his duties are the inspection and supervision of all the employees responsible for the firing of steam locomotives, and the terminal heating plants. We do not just deal with locomotives; we deal with every item in our plants in our terminals and elsewhere, which emits smoke, and it is part of this man's duties to see to it that all these employees responsible for the production of smoke in any form, are properly instructed as to how to proceed with the firing.

On the road itself, we have road foremen assigned to each division, instructing engine crews with regard to their firing methods, and, in addition to that, we have a number of smoke-abatement inspectors, men trained in the subject, who have no other duties --

BY THE CHAIRMAN:

Q. It is a full-time job?

A. Yes, a full-time job. They are assigned to the major terminals wherever the problem justifies the engagement of a full-time man.

In the smaller terminals, we have men on part-time, but in the major terminals we have men who



devote their time to this problem, and it is their exclusive duty to instruct the men and supervise the steaming up of locomotives, in the firing on all shop tracks, the firing in stationery boilers, and so forth, and that is the position we have taken, not just recently, but for many years, and the cost of this runs into quite a penny.

Now, I would like to call your attention to the most profound abatement results from our dieselization programme.

We are in a period of transition at the moment. I will give you some figures, but, by and large, I would say we are halfway through it. We have a five-year programme for turning our steam locomotives to full dieselization in due course. That is a very, very costly procedure.

For example, we are now in the fifth year of our programme, and we have spent \$164 million so far; our current programme will amount to about \$80 million, so we have a total expenditure, either accomplished or in hand, of roughly \$250 million. By the time we are through, we estimate it will amount to well over \$500 million.

I suggest when you get into figures of that size and volume, and all that is involved, you



will agree that it takes the most careful organization to handle it, or you just get into a complete "mess".

It is not only the matter of buying diesel locomotives; it is the relief of all the auxiliary facilities connected with it, the re-modelling of our shops, and the re-training of our men, and changing our passing tracks, in fact, changing all our facilities for the handling of a very acute personnel problem of disrupting men in their routine work, and re-training them, or giving them up altogether.

Q. Do you mind questions as we go along?

A. Not at all; I would like them.

Q. On this particular point, Mr. President, I sometimes wonder -- and perhaps you can answer the question: -- why, in larger urban areas like Toronto, Hamilton, Windsor, and so on, you do not have the diesels on as many of the trains as you do in the more isolated sections of the country, where smoke and air pollution is not too much of a problem.

Is there any reason why you cannot dieselize faster in urban areas, and keep the old coal-burners out in the rural districts?

A. Yes, and for good reason. There are two ways of going at this business of turning from steam locomotives to diesel.





One way, which has been adopted by some railways, is to do it on a regional basis, that is, to take a whole region and dieselize it.

On the Canadian National Railways, we came to the conclusion that was not the wisest nor the best way to do it, and we are turning into dieselization on the basis of service. We studied each one of our services to see in what way they can best be dieselized.

We are a transcontinental railway, and our through freight yields us the best results for immediate dieselization.

Then we come to our yard service, and our switching, and into the passenger service -- and I do not mind telling you in passing that the economic results from the dieselization of passenger services are much less than any other services, the reason being very simple, and that is that a diesel or electric locomotive does not produce heat, and we have to put on additional boiler units for the purpose of producing steam, for the simple purpose of keeping the passenger trains warm, and that cuts down our economic service. We do not have to heat freight trains the way we do passenger trains.

Q. That may be one of the reasons for leaving the steam engines on passenger trains as long as possible?



A. That is right. That is one of the reasons.

Also, there are types of switching operations which we can do much more economically in the process of running out the mileage we build into these steam locomotives. We cannot abandon the steam locomotives over night. We have to keep them alive, and we have to service them, and in the course of servicing them, we build a certain amount of mileage into them, and we should run that mileage out, otherwise we are wasting our money.

BY MR. ELLIOTT:

Q. That is, in investment?

A. Steam locomotives can be kept alive forever. We have steam locomotives on this railway which have been fifty years or more in service.

MR. DINGLE: Probably entirely rebuilt.

THE WITNESS: Yes. They could go on forever, but we have to decide at a given point in our dieselization programme, as to when to take the units of steam locomotives, and put the maximum mileage into them, before we change over; otherwise, we are just wasting money.

Let me assure you that the question of converting into full dieselization is a problem which calls



for the most expert knowledge and scientific approach, if we are not going to produce a great deal of waste, and, what is even more serious, if we are not going to get our system into a state of confusion. Our main job is to keep traffic moving, and to do that, we must have employees and facilities to fit into the plan, and when we get to the stage where we have half-and-half, then we get into a position where it is difficult to manage a railway.

To show you the progress of our dieselization programme, it was only a few years ago that our motive power was all steam. I came with the Canadian National Railway in 1950, and at that time our programme was very small for dieselization.

But last year, the gross turnover, which is the yardstick we use in measuring our programme -- and I may say that while I have figures for all of Canada, these are for Ontario only -- in Ontario, there were 49 percent. steam, and 51 percent. diesel.

BY THE CHAIRMAN:

Q. When was that?

A. During the year 1955.

MR. DINGLE: As of now.

THE WITNESS: Yes, as of now -- 49 percent. steam and 51 percent. diesel in our freight service.





In our passenger train miles, it was 69 percent. steam and 31 percent. diesel.

May I repeat that? It was 49 percent. steam and 51 percent. diesel in freight movements, and in passenger movements, it was 69 percent. steam and 31 percent. diesel.

In our yard engines -- that is, engines switching around the yard, based on engine miles, which is the yardstick we use there, we had  $31\frac{1}{2}$  percent. steam and  $68\frac{1}{2}$  percent. diesel.

That is the problem we have on hand. We have diesels ordered, but it will take from eight to eighteen months for delivery; again, you cannot build these over night, but with the orders actually placed, we estimate, when we have these in hand in the course of the next twelve or fifteen months, the figure will change, and we will have, in freight, only 39 percent. steam, and 61 percent. diesel.

BY MR. ELLIOTT:

Q. Two years from now?

MR. DINGLE: No. The orders now placed. There is still another order which has just been placed. We will secure deliveries of the diesels to which Mr. Gordon is referring, and they are coming along all the time.



Q. By the end of 1957, you should have 39 percent. steam and 61 percent. diesel? Is that what you say?

A. Certainly. It will build up to this figure. By the end of 1957, we should have 39 percent. steam for the freight, and 61 percent. diesel.

In the passenger service, we estimate we will have 51 percent. steam, and 49 percent. diesel.

The yard engines will be  $28\frac{1}{2}$  percent. steam, and  $71\frac{1}{2}$  percent. diesel.

That shows a very substantial growth in the course of a year.

MR. DINGLE: Mr. Gordon, you might emphasize these are Ontario figures.

THE WITNESS: Yes, these are Ontario figures. I am not giving the system figures at the present time. I have those figures if you care to have them.

While we are embarking on this major diesel programme, we think, in the course of a relatively few years, we will have the big answer to smoke abatement. We have not been neglecting, by any means, the proper combustion and reduction of emission of smoke by steam locomotives. We have installed overjets on all our steam engines, and have been very effective in minimizing smoke.

Some years ago, the fire boxes were giving



a great deal of dust, and steps were taken to control the flow of air to the fire box, and more recently baffles were installed to equalize the air flow from the fire pit.

I mention this, to show we are working on it, and spending money, because these installations on our steam locomotives run into a sizeable amount. We spent this money buying these instruments, because we knew they were something we had to use; it was not money we wanted to spend, but to reduce the complaints. The cost of these particular installations we estimate to be well over \$1 million, an average of \$1,000.00 per steam locomotive.

BY THE CHAIRMAN:

Q. I am glad you mentioned that, because some people are of the opinion that, due to the fact that the steam locomotives are going to become obsolete, the railways are not keeping up the maintenance on them.

A. That is not right. In the first place, we must keep our steam locomotives up to a safe standard. We must have them in good and efficient repair, because it would be most imprudent for us to run locomotives which are not in good shape.

Secondly, each one of these locomotives has been studied and given attention, and we have averaged



an expenditure of \$1,000. per locomotive, or nearly \$1 million, aimed at this matter of the control of smoke.

In addition to that, we have other things. For instance, we have a very definite policy in regard to the quality of our fuel. We are in a constant battle with our coal suppliers, and insist we secure the quality of coal which will give the best results, having this smoke abatement in mind.

I do not pretend to be completely altruistic in this; of course, we are looking after ourselves, but I think it may be accepted as a fact that it is the firing which has a great effect on the control of smoke. We also have been very definite in regard to that.

Then we have a definite programme in regard to the conversion of our stationery steam plants -- and we have a great number of them around the country. We find that converting them from coal to oil or gas will reduce the emission of smoke, and in the last five years, this conversion has cost us in excess of one half a million dollars, and further installations are being planned.

Q. We saw one in the Brockville roundhouse a week or so ago.

A. I hope I have said enough to show that we have





been taking a far from irresponsible attitude. We must remember that our first duty is to provide service to the people, and in doing that, we serve the vital needs and welfare of the communities.

Unless you can get good transportation, in a way only the railways can provide, which is bulk volume, the communities will suffer, as other means are only touching the fringe of goods needed in this country.

BY MR. ELLIOTT:

Q. At the rate of dieselization at which you are going now, by, perhaps, 1960, you will be completely dieselized?

A. We hope so. I want to make this qualification; I do not like to make promises unless I see my way clear to keep them.

If we follow through at that rate, you are quite right. But we will reach a point in about three and a half or four years when I think we will have to decide "all-out" for dieselization, or whether there is a segment left where good business sense makes the running of the mileage out of our surviving steam locomotives<sup>essential</sup>, and there may be a period when we will be using steam locomotives --

Q. After 1958 or 1959?



A. Yes.

Q. But that will be a small percentage?

A. Yes. Of course, I am not saying we will do it. At that time we will have studied it to see whether we shall take the plunge.

My own opinion is we should clean it up, but I will be guided by the hard, economic facts, as to whether we can afford it. There will be a time when the policy makers will want another look at this thing.

Q. And the roundhouses will not be needed?

A. Yes, but to replace them with diesel shops, which will perform the service.

But, combined with that, is the question of developing technology. We do not know that diesels will be the last answer. Right now, we are examining the details of the hydraulic, which is a different kind of diesel altogether.

Then, with the use of the gas-fired turbines, we may have a different type of motive power altogether. We are not wedded to any type. We will change our procedure when we find it is mechanically possible, and that it will be economical for us to do so.

I have with me the men who are most responsible for these operations. Mr. Dingle is Vice-President in



charge of operations, and in charge of operating our railways from the standpoint of moving trains and getting them there on time, or approximately so.

Mr. Wynne is in charge of motor power and car equipment, and everything that comes within that field.

Again I apologize for having to leave you myself, but I am leaving you in the hands of men who are better qualified than I to give you details. However, I hope what I have said has been enough to show you that we accept this as a serious problem, and we are prepared to give you our fullest co-operation. There will be no holding back of any information which is desired by you.

BY MR. ELLIOTT:

Q. Your programme next year is very good, yet Toronto or Hamilton do not come under it?

A. In all honesty, I must say that because of the concentration of our traffic, that is one of the drawbacks to dieselization, and the hard core of it will be in central Ontario, and that is where we can use to best advantage the remainder of our steam locomotives.

In Stratford, Ontario, there will be our last steam locomotive shop, and it will be the last one





to go, because --

BY THE CHAIRMAN:

Q. You will not land all your old coal-burners into downtown Toronto?

A. By no means.

MR. MACAULAY, Q.C.: May I ask one simple question, Mr. Gordon?

THE WITNESS: By all means.

BY MR. MACAULAY, Q.C.:

Q. First you have shown your interest in what we are hoping to do, and we will go into greater detail with your associates in regard to this.

But, on behalf of the railway, and as its President, can you assure us we will have the opportunity of obtaining from the railways all the information we need on this subject to assist us in our findings?

A. I will be delighted to do so. If it will not be regarded as an impertinence, may I make a suggestion, where we think you are wrong?

Q. We would be happy to have it.

A. I will make one suggestion now, and it is entirely a personal opinion, and should not be considered as anything else.

I noticed, in reading the interim report, that you refer to the subject of "legislation". There



is some doubt as to whether you are intra-vires or ultra-vires with regard to your proposed exploration into the idea of securing legislation.

That, I think, will be a fundamental mistake in terms of your objective, and for this reason; the minute you get into legislation, whether it is intra-vires or ultra-vires, you will place the railway in a position where it will obey the letter of the law, and nothing else. You will formalize the situation, where the railway will (a) have to do everything it can to make certain the legislation provides enough leeway, so it can operate; otherwise, you would shut the railway down, and (b) when you have legislation of that character, I suggest there will be so many loopholes in it, it will not be effective.

Then the railway, as business people, will have to say, "There is the law, and we are obeying it", and that is what we will have to do.

You will get far better results by working in close co-operation with the railways, and I can assure you the railways will be aiming their policies to co-operate in any possible way. However, legislation is not the answer.

Q. If we felt we needed it, some instructions could be given to your officials in Ontario -- I am not



suggesting it has not been available -- but some instruction could be given to your officials in Ontario to be of assistance to us in our search for information, with regard to the railroads?

A. I can give you that absolute assurance. There is no secrecy in what we are doing. We will be only too glad to tell you anything we can.

THE CHAIRMAN: If you have another appointment, Mr. Gordon, we will be happy to excuse you, but we would like to have you stay for our meeting, but I understand that is not possible.

THE WITNESS: I feel guilty about this. I would have liked not only to have completed this discussion, but to carry on with your meeting. I made a date with you and I feel guilty about being in this position. I cannot tell you the reason for my departure, but I can assure you it is of importance.

If you will forgive me, Mr. Dingle will carry on with you, and he is well informed on anything which may arise.

THE CHAIRMAN: Thank you very much. We would like to feel free to call upon you from time to time, and perhaps see you again.

THE WITNESS: I will be glad to see you at any time. Thank you, very much, Mr. Chairman and



gentlemen.

---The witness retired.

THE CHAIRMAN: I am sure we have some questions, following Mr. Gordon's talk to us, which we might address to Mr. Dingle and his associates.

MR. GORDON, M.P.P.: Mr. Chairman, no doubt the information Mr. Gordon had when he was speaking to us was provided for him, but may I say to you, Mr. Dingle, that in our meeting with your branch, at Windsor, we were told there by those who do the job of firing and the engineers, that little or nothing has been done to correct the emission of smoke.

For instance, firemen, when they are charged with smoke emissions by the city authorities there, and it is found that engine numbered so-and-so has been the cause, the fireman receives five demerit marks, and so on, and if it builds up to a certain amount, he is dismissed, or something happens to him, even with the five demerit marks.

One engineer stated that the poor firemen could not help doing what they did, because of the conditions of the engines, and that nothing had been done to relieve that method of causing smoke emissions.

You say here that everything has been done,





and you have experts on the job to-day, saying this could not happen, but when we get that information from the men themselves, what is the answer to that?

MR. DINGLE: I may say at the outset, of course, that we do not pretend to be perfect. But we are seeking to work toward perfection in all of these things.

Let us consider Windsor, first of all; it is the joint terminal, used by the Wabash Railway, as well as ourselves. They pay us running rights for the use of our facilities. It is on a joint basis, and perhaps their traffic amounts to something between 75 and 80 percent. of the traffic in and out of Windsor. True, we have a number of diesels, and every system of change-over will provide better facilities.

We have provided additional diesel switchers, as you probably may know. That was done last year, and I am sure there are one or two more this year.

When it comes to the fireman who has been assessed demerit marks, saying he was not treated properly, because he could not avoid the situation in which he found himself, I will ask Mr. Wynne, one of our mechanical men, to deal with that phase.

MR. WYNNE: It is very difficult to answer a question of that kind, because I do not know the



equipment which was involved, nor the individual, so I cannot say whether the statement which was made by the engineer was correct, or whether it was not.

The point we made was that in the alterations and the change of switch engines, we put in the over jets, which were obtained after exhaustive tests, and if they are operated by firemen who are familiar with dealing with steam valves, it will eliminate smoke after they put on the fires. The ones we adopted, have been approved and used by many American railroads.

As far as the road power is concerned; we do not pretend that every engine is in 100 percent. mechanical condition. We just cannot afford to keep all our engines in 100 percent. shape. It is the same as with an automobile; when it is brand new, it is in 100 percent. mechanical condition, but as its life extends, some of the parts become worn, and it is not as good as it was when it was new.

But the locomotives are maintained in accordance with the requirements of the Canadian National maintenance regulations, and the orders of the Board of Transport Commissioners, and every month, every three months, every six months, and every year, they are given the prescribed tests, and any defects



are repaired, I might emphasize again, in accordance with the Board's orders, because they have a large influence on the conditions to which you have referred.

I may say this; if a locomotive developed a steam leak, and was due for a washout in three or four days, when the super-heating units are tested, the leak will be discovered, and will be repaired at the roundhouse. It might run three or four days with that leak. It would not cause black smoke, but it would perhaps make the engine a little harder to steam.

I am not trying to hide anything from you. Sometimes engines get into a condition where they must be repaired, and if they are operated under those conditions, they have a tendency to produce smoke of a dark colour.

If I see an emission of black smoke, we will not operate that engine. Whether What happened in this case to which reference was made in Windsor, I cannot say. But as far as the mechanical condition of the engines is concerned, we have regulations of our own, and the Board's orders which are observed.

Does that answer your question?

MR. GORDON, M.P.P.: If I remember correctly, the engineer said -- are these air jets expensive equipment?





MR. WYNNE: No, not on the switchers.

MR. GORDON, M.P.P.: The engine man said it was very inexpensive, and did not do very much anyway. It was just a token.

MR. MACAULAY, Q.C.: How expensive is it?

MR. GORDON, M.P.P.: It was said --

MR. WYNNE: They cost about \$25.00 or \$30.00, to put them on the switch engines.

MR. MACAULAY, Q.C.: How many switch engines have you in Ontario?

MR. WYNNE: I cannot tell you that.

MR. MACAULAY, Q.C.: What proportion of switch engines in Ontario would have this \$25.00 device on them?

MR. WYNNE: All switch engines on the Canadian National have them. Insofar as this man saying they were ineffective --

MR. BELYEA: I think what Mr. Gordon, M.P.P. is referring to were these small air jets for igniting the engines. We were told they cost somewhere around \$1.00.

MR. MACAULAY, Q.C.: I understand Mr. Wynne is speaking about something else.

MR. WYNNE: Yes.

MR. MACAULAY, Q.C.: Those are the switchers:



what about the other coal-burning engines in Ontario?  
Is there any similar kind of installation on them?

MR. WYNNE: You could not put this device on  
a road engine.

MR. MACAULAY, Q.C.: So they have nothing?

MR. WYNNE: I might explain why it goes on  
a switch engine. It is because switch engines are  
working around a large terminal like Toronto, and the  
firemen throw a fresh charge of coal onto the fire,  
and then they want to get enough air to provide complete  
combustion, and prevent the emission of smoke.

In regard to the steam jets; there are holes  
in the sides of the firebox, and they blow air into  
the firebox, which is oxygen, and they burn out all  
the gaseous products.

MR. MACAULAY, Q.C.: Why could that not be  
done on the ordinary engine pulling a train out of  
Toronto, at the present time?

MR. WYNNE: For the reason that on the  
switch engines, you do not require the over jets,  
when the engine is hauling cars, because there is such  
a draft, that an ample supply of air is drawn up through  
the grates, perhaps even more than is needed.

It is when the engines are standing that  
we need assistance in regard to the combustion. It would



be very wasteful of fuel, if you put a device of that kind on a road engine.

THE CHAIRMAN: In connection with the round-houses; I have a question which I do not know whether I should ask Mr. Dingle or Mr. Wynne.

MR. DINGLE: Let us see what it is. Mr. Wynne will take it if it is purely technical.

THE CHAIRMAN: I am referring to the roundhouse at Spadina Avenue in Toronto, which is really an awful offender smokewise, as perhaps you know. I drive in from the west pretty well every morning in Toronto, and there is a great pall of black smoke there almost continuously.

Could you tell us what causes that, and if the removal of the coal-burning locomotives is going to remove that from the chimney, and if so, how long do you think it will be before we get rid of that smudge which is really an awful offender, and causes discomfort among thousands in the area around downtown Toronto.

MR. MORNINGSTAR: Is that the Canadian National or the Canadian Pacific?

THE CHAIRMAN: It is the Canadian National.

MR. WYNNE: I know that condition there, and it comes from lighting up the steam engines. When the



railway is fully dieselized, it will disappear, and be gone forever.

MR. MACAULAY, Q.C.: I think President Gordon indicated that the "hard core of Ontario" would be the last to be dieselized, and the decision has not been reached regarding complete dieselization, so we will have to work on the assumption that you will not have complete dieselization, so we will have to endeavour to resolve some solution to the offence, which is there now.

MR. DINGLE: Our percentage of diesels will increase even in that area, as time goes on.

MR. MACAULAY, Q.C.: We find, even if you have a few steam engines remaining there -- I think the proportion was given by President Gordon -- that the engines in the yards are pouring out this filth and stink and black smoke.

Is there not some sort of instrument which could be installed in the stacks, either of the machines themselves, or above the machines, to collect that filth in some way?

MR. WYNNE: This is the difficulty we run up against: let us assume that you have, say, fifteen or twenty engines in the shop, and the fires are being lighted, or the fires are lit. Smoke will come out of the smoke stacks of those engines, and is collected





by a special collector system, which is on the outside, and is about six feet in diameter.

The observations and tests we have made indicate the density of the smoke from an individual engine, and it is accepted, but when you put it all in together --

MR. MACAULAY, Q.C.: How is it tested?

MR. WYNNE: By the Ringelmann Chart. When you put it all into one stack, then the density is such that it becomes objectionable.

I think the point Mr. Dingle made was that with diesels, we will have fewer and fewer steam engines, and I feel quite sure that due to the fact that we will be lighting up fewer steam engines, the density of the smoke which comes out of that stack will be greatly reduced --

THE CHAIRMAN: I would like to say right here --

MR. MACAULAY, Q.C.: May I finish this one point, and then I will be through?

THE CHAIRMAN: Yes, certainly, Mr. Macaulay. Just go on.

MR. MACAULAY, Q.C.: You say that tests were ~~actually~~ carried out. How long were the tests carried out at the old Spadina yards?



MR. WYNNE: I cannot answer that.

MR. MACAULAY, Q.C.: When did you carry out the last test?

MR. WYNNE: I cannot just say --

MR. MACAULAY, Q.C.: By whom was it carried out?

MR. WYNNE: Mr. L. S. McGregor, Superintendent of Motor Power.

MR. MACAULAY, Q.C.: How many smoke abatement officers have you in Ontario?

MR. WYNNE: Two in Toronto, and three in Montreal.

MR. MACAULAY, Q.C.: Do you know the names of the two in Toronto?

MR. WYNNE: No.

MR. MACAULAY, Q.C.: You do not know when you last carried out a test of that roundhouse, what the result of it was? Would it not be recorded somewhere?

MR. WYNNE: Yes, it should be.

MR. MACAULAY, Q.C.: Could we have copies of the tests you have carried out, over the last five years?

MR. WYNNE: Could do. You could get that from Mr. McGregor.

MR. MACAULAY, Q.C.: How many roundhouses do



we have in Toronto?

MR. WYNNE: We have one at Mimico.

MR. ELLIOTT: That is really larger than the one at Spadina, is it not?

MR. WYNNE: They are both about the same size.

THE CHAIRMAN: The only difference is that in Mimico you have many more diesels than you have downtown.

MR. WYNNE: That is true.

THE CHAIRMAN: Have you finished, Mr. Macaulay, on that line of questioning?

MR. MACAULAY, Q.C.: Yes, for the moment.

MR. DINGLE: I might mention, if I may interrupt, that in regard to the orders we now have on the books, we are receiving deliveries of them, and we will have, by March 31st, dieselized all of the through trains from Montreal to Chicago.

THE CHAIRMAN: That should make a difference.

MR. DINGLE: Yes, I think so.

THE CHAIRMAN: In connection with the Spadina situation, again, from a layman's point of view, and from my own observations, the emission of black smoke from the large stack at Spadina has not materially changed in, say, the last ten years, and I





have been riding back and forth much longer than that.

You can probably answer this question, Mr. Wynne. You can<sup>go</sup>/by there any time of the day, and it seems to be very constant; the smoke is always coming out of the stack.

One of the things Mr. Gordon mentioned -- and we have had other people also mention it -- is that it comes out at an increased rate, when this black smoke is coming out of the chimneys in the mornings, and I do not believe they are getting the best combustion out of their coal, as we seem to see the smoke coming out at all hours.

What I would like to know, as would the members of the Committee, and I am sure the residents of the downtown Toronto area would be interested in knowing, is why we cannot have complete elimination of that black smoke, if you can get complete combustion?

MR. WYNNE: I do not know how we could hope to light up a coal engine without making a certain amount of smoke. We might use a gas fire.

MR. MACAULAY, Q.C.: They apparently can do it in Detroit and other places in the United States, where we have attended.

MR. BELYEA: They have stated they can light up a locomotive with zero smoke, although it may not be



entirely practical. We have been given that information. Have you seen the people who have been studying that method, to determine why it cannot be done here?

MR. WYNNE: That depends on the fuel. They may use a high volatile fuel.

MR. ELLIOTT: Have you run into any trouble here over the fuel?

MR. WYNNE: I cannot answer that.

MR. BELYEA: Do you know what they have done in Detroit?

MR. WYNNE: It is possible they have different coal. Perhaps some of you are familiar with the anthracite coal from Wales. It is not as high volatile, and it is easier to control the smoke.

MR. BELYEA: Did you ever consider keeping a small supply of high volatile, to avoid the smoke?

MR. WYNNE: That came up, when you speak of Detroit. My point is that when you have a cold fire-box and light a fire in it, the trouble is because the coal gradually moves the gases off before they have a chance to burn, and it is a gaseous smoke. After all, smoke is nothing but small particles of unconsumed carbon.

MR. MORNINGSTAR: We were told that when they are lighting up a locomotive, after it has been washed



out, they have some kind of a burner they put in to heat the box up.

MR. WYNNE: We use that. We are lighting with oil, and not coal. We use the Maher fire lighter.

MR. MACAULAY, Q.C.: Is that after the engine has been idle and cleaned?

MR. WYNNE: Every time we light a fire.

MR. MACAULAY, Q.C.: They are not very effective, otherwise the smoke would not still be coming up.

THE CHAIRMAN: The reason they used it was to eliminate smoke. They are using it in the Lambton roundhouse, which is a Canadian Pacific roundhouse, of course, and is in my neighbourhood.

MR. MACAULAY, Q.C.: Do you use any high-volatile coal to start up these engines?

MR. WYNNE: No.

MR. MACAULAY, Q.C.: Could you?

MR. WYNNE: You could do a great many things. It would present too many problems. You would have to have special fuel, and it would have to be loaded onto the tender, and fed into the firebox, with a stoker screw.

MR. MACAULAY, Q.C.: Economically, it would present a problem?



MR. WYNNE: Yes, and a considerable amount of disability and inconvenience.

MR. MORNINGSTAR: All the smoke enters one stack?

MR. WYNNE: Yes.

MR. MACAULAY, Q.C.: Is there anything to collect the fly ash from your stack?

MR. WYNNE: No.

MR. MACAULAY, Q.C.: You just let it loose?

MR. WYNNE: That is right.

MR. MACAULAY, Q.C.: Is there nothing you could do to collect the fly ash?

MR. WYNNE: It could be done at tremendous expense.

MR. MACAULAY, Q.C.: What could be done?

MR. WYNNE: You could put in equipment to trap the fly ash, but it would cost a "dickens of a lot of money", and, you must understand, we would not be using it after the next four or five years.

MR. MACAULAY, Q.C.: I am thinking of the children of my constituents having to breathe this in for the next five or six years. Have you made a study of it?

MR. WYNNE: No.

MR. MURDOCH: It would be quite a problem to





have a smoke by-law and the problem of this particular stack, because our trouble is that everybody blames the other fellow. We get it from the steamships, industry, and the railroads, each blaming the other, and they do not clean up, unless the others do.

Mr. Wynne has mentioned that this goes into one stack, so it will continue to offend.

THE CHAIRMAN: The reason for putting it in the stack, in the first place, was to cut down the smoke emissions?

MR. DINGLE: And to raise it.

THE CHAIRMAN: In other words, to help control it?

MR. DINGLE: That is right. The normal roundhouse has stacks right in the roof, and we collect it in the roundhouse through large ducts, and it goes in to this high stack.

THE CHAIRMAN: On that particular point, Mr. Dingle -- and again speaking as a layman -- I do not think it has done any good at all, because about the only benefit from that stack is that instead of sending it into this closed line, it moves over into another one, and it does affect somebody.

I was a bit concerned when Mr. Gordon said that central Ontario -- and I can see "central Ontario"



boiled down to the Toronto waterfront -- receiving the benefit from these old coal-burners for several years to come.

MR. MACAULAY, Q.C.: Maybe forever.

THE CHAIRMAN: I am wondering about that downtown situation.

Do you feel, Mr. Wynne, that presently everything possible is being done to curtail the smoke nuisance in downtown Toronto?

MR. WYNNE: I would point out one of the things which has been done through dieselization, and that is the elimination of a number of engines which are the principal offenders, because you must remember that a switch engine is in the Toronto area twenty-four hours a day, while a freight train is gone in ten minutes. But the switch engines, the principal offenders are there twenty-four hours a day. They are scattered all over the Toronto area.

However, these will be completely dieselized, all of the sixteen-hour and twenty-four-hour zones will be dieselized.

THE CHAIRMAN: I have watched it. The lakefront is at my front door and I see it every day. There is no question about it, there are many more diesels running over the tracks there than before, but you do not have



to be very smart to see one of the old coal burners shooting out smoke, and then see four or five diesels, with nothing coming out.

Getting back to that stack situation; if the coal burners which are left are still going to be sanding that stuff out of the stack, I think they will be a long, long time in cleaning it up.

MR. MACAULAY, Q.C.: Do not drive them to the wall, and obviously, we are. They have not taken any steps. They do not say they cannot do anything, but they have nothing to collect the soot. The President said they will have to make a decision three or four years from now as to how far they will go into dieselization, and the last place to be dieselized will be central Ontario. Let us not drive them into a corner. We know this has been going on for years.

MR. BELYEA: I would like to ask another question about the roundhouse and the stacks. Presumably, every one of these stacks from the locomotives goes up into a single stack, and the inspector cannot see the smoke which is coming out of them, and he does not know whether they are smoking or not, and does not know when to add extra air.

MR. WYNNE: All they have to do is to look





into the firebox.

MR. BELYEA: If they started putting an electric signal into the stack, which would ring an alarm when it is smoking, they could then take action.

MR. WYNNE: It would not last very long.

MR. BELYEA: That has been done in Indiannapolis and other places.

MR. WYNNE: On the railways?

MR. BELYEA: Yes.

MR. WYNNE: With industrial installations, they can do it quite easily. But in a situation such as Spadina, I doubt very much if they would be reliable after a short period of time.

MR. BELYEA: Have they looked into that, as a possibility?

MR. WYNNE: There again, it is a question of expense, Mr. Belyea. All of these things add up to a great deal of money.

MR. MACAULAY, Q.C.: Have they actually looked into it to see whether it could be done, and how much it would cost?

MR. WYNNE: Not to my knowledge.

MR. MACAULAY, Q.C.: You say you have two air pollution officers in Toronto, and three in Montreal. I understood Mr. Gordon, the President, to



say what their exclusive responsibilities are.

Could you tell me just once again what the duties are of those whom you call "air pollution officers"? What do they do?

MR. WYNNE: The duties of the air pollution officers are to inspect the lighting-up men, who light up the locomotives, to prevent the emission of black smoke.

Secondly, to police or supervise them, to see that they do.

MR. MACAULAY, Q.C.: Is that all a man does?

MR. WYNNE: No.

MR. MACAULAY, Q.C.: What else does he do?

MR. WYNNE: One thing<sup>is</sup> he has to inspect or police or supervise the crews operating engines in the Toronto area, with regard to firing methods, to prevent the emission of smoke, and also to take statements from them, and take them up with us.

MR. MURDOCH: Would there be a copy of written orders given? In other words, would you make sure he has read the orders?

MR. WYNNE: To which man are you referring? The fireman?

MR. MURDOCH: Yes, the man actually in charge of whether an engine smokes or not. Are there



any written orders on that?

MR. WYNNE: Are you referring to the inspectors themselves?

MR. MURDOCH: Yes, and those in charge of the firing.

MR. WYNNE: They would be largely oral instructions.

MR. MURDOCH: It is a wonderful thing to write things down in black and white, and mention figures. If an employee signs this, it is apparently understood that the employee knows what he is doing.

I think we have found some places in the States where they put out a positive type of programme and wrap it up very well, and they have had excellent results.

Of course, they brought in this one point of written orders. There were written orders as to the times when inspections were to be made, and they followed through from that. In other words, it was done in a businesslike manner, sort of a routine, as it were.

I would think the written orders would be used, which would show that you are concerned with this matter.

MR. WYNNE: You may have a point there. The only thing we would run into might be this: you cannot



write a book and tell a man how to run a locomotive, or drive a car, or operate an airplane. We find that demonstration and <sup>oral</sup> instruction are the most effective ways of doing it. I cannot believe that written instructions would be better than demonstrations and personal instructions. That is the policy we follow.

Mind you, there are other things. Our engine watchmen have to pass a written examination to show that they are familiar with the responsibility they are to assume. There are some things which have written examinations.

Another thing is that our labour turnover is fairly high, and the men have seniority, and we have men working outside, who will become firing inspectors, and you have to instruct them how to do it.

To write a book on it is not as effective as what we are doing.

As a matter of fact, we have found that written instructions are not followed too much, not as much as oral instructions. That is why we have road foremen out on the road, and if we have someone who knows this question, and can give proper instructions, we think that is best.

MR. MACAULAY, Q.C.: Mr. Wynne, you were kind





enough to indicate there were certain duties those men have. Is there any other duty they perform?

MR. WYNNE: No, that is their responsibility.

MR. MACAULAY, Q.C.: Do they keep records?

MR. WYNNE: They keep records of their own.

What they are, I cannot say. I would have to get that from the legal department.

MR. MACAULAY, Q.C.: Could we then, in view of the indication given by the President and yourself, have made available to us, the reports they have made in relation to that roundhouse?

MR. WYNNE: I think the best thing is to talk to those chaps.

MR. DINGLE: I made a note giving instructions to make available what information we have.

MR. MACAULAY, Q.C.: That will be wonderful. President Gordon spoke about scientific tests he was prepared to demonstrate. What scientific tests have you made to justify the statement you make that you believe you have done more than industry, by way of practical tests, in relation to the amount of smoke you put into the air? What scientific tests have you made, and where were they performed?

President Gordon said this morning that there were records of the practical tests in regard to the



amount of smoke which is put into the air, and he went on to say that you have carried out scientific tests, which you were prepared to demonstrate.

MR. WYNNE: I am not just sure to what he was referring.

MR. MACAULAY, Q.C.: Will you tell us about some of the tests you have made?

MR. WYNNE: The particular tests we have made have been in connection with the elimination of smoke from switching engines. That was a nuisance to all the cities in Canada, and we secured a number of devices which are used in the United States, and modified them to suit our own engines, and we carried out tests in various parts of Canada, and they were reported on by the regional officers, until we could feel satisfied they were devices which would eliminate smoke.

MR. MACAULAY, Q.C.: And those are the scientific tests to which President Gordon referred?

MR. WYNNE: I cannot say. Frankly, I am at somewhat of a loss there.

MR. DINGLE: It could be in respect to our stationery plants, and so on.

THE CHAIRMAN: In connection with Mr. Macaulay's question, could you get some information on



these tests, and send it to the Committee? Would you do that?

MR. WYNNE: I will be glad to.

MR. MACAULAY, Q.C.: You have carried on tests with reference to your stationery plants, from what Mr. Dingle has indicated.

MR. DINGLE: Yes. They have been under what we call the "fuel committee", which is a permanent committee set up by our railroad composed of departmental officials in conjunction with our practical men.

All of these things at the time of the change-over and so on, in addition to the change, for example, from coal to oil-fired or gas-lighted boilers, was taken into consideration.

It might be useful to the Committee to turn one of these studies over to you, to show what the make-up is.

MR. MACAULAY, Q.C.: It would be definitely useful.

MR. ELLIOTT:

We have been told that to clean up smoke, dieselization is a big help, and I hope that Hamilton will not be excluded. I have been around with this Committee, and I have not seen as dirty a place as the waterfront in Toronto. That situation should be cleaned up.





MR. MACAULAY, Q.C.:

Mr. Dingle, would you have any comparative figures or percentages as to the amount of money spent on the control of smoke in Ontario, or the Central Region, as compared to the total operation?

I do not expect you to tell us right now, but could that be included in what you will be sending to us?

What part of your budget is devoted to that item of "smoke control"?

MR. MACAULAY, Q.C.: And what items does it cover?

THE CHAIRMAN: Yes. We have it on record that there is a certain percentage you intend to spend on air pollution control, and it would be nice to get the railroad's percentages.

MR. ELLIOTT: Personally, I think they have all this information, and know what we want.

Could they not arrange to have a man meet with the Committee in Toronto and hand this information on to us?

THE CHAIRMAN: Mr. Dingle said they would be glad to do that.

MR. DINGLE: I think the most effective way to handle this situation, now that we have some of your points, is to gather this information together,



and if necessary, arrange for a headquarters officer to meet the Committee in Toronto, together with the local people there.

MR. MORNINGSTAR: How many engines would there be in the Spadina roundhouse?

MR. WYNNE: It varies. There might be anywhere from 30 to 60.

MR. ELLIOTT: It is a continual twenty-four-hour-per-day proposition?

MR. WYNNE: Yes.

MR. MORNINGSTAR: It would cost money, and I would like to know how many engines would be affected.

We have been in Pittsburgh, where they have the open blast furnaces, and they say they are collecting 90 tons of pollutants a day. It costs money to do these things.

If they had an installation on one stack, perhaps it would be worth looking into, and seeing what it would cost to have some collective installation there.

MR. MACAULAY, Q.C.: As Mr. Dingle indicated, I think it would be useful for somebody to meet the Committee, and rather than take up anybody else's time, I might lump my points together, and give Mr. Dingle the information as to the kind of things in which I am



interested, and then hear what the railway has to say.

I would like to know what the railways think about electrification.

I would like to know what tests they carried out on diesel emissions.

I would like to know whether they have investigated the problem of odours, and so on, from diesel engines. We will give you a transcript of our evidence.

I would like to know what studies you have carried out in relation to the Order of 1908, and whether you consider it satisfactory.

I think perhaps that is the most fair way of doing it, so instead of "putting you on the spot", you will have a just and equitable opportunity to consider it here with your officers involved.

Personally, I do not think the Order of 1908 is any more up-to-date, than the chaps who came over and landed on Plymouth Rock, and I would like to know whether or not the railroad feels it should comply with it.

I would like to know what standard you adhere to in the country, rather than cities such as Toronto.

I would like to know what training your abatement officers have.



I would like to know when you spend \$500 million on dieselization, how much you have spent on air pollution.

I would like to know how many deliveries of diesel engines you will be making into the Toronto-Hamilton-Windsor area.

When President Gordon says the through freight mile gives the best results, I wonder whether he meant by putting diesels on freight trains, and if he meant by "best results", that the Company made more money, or whether there were better results from the point of view of air pollution.

I would like to know whether you consider dieselization the answer to air pollution, because I do not.

I would like to know what the railway thinks about an Order which was drafted by the legal officers of the city of Toronto and agreed to by the local office, as being something which could be put into force in the city of Toronto, and then the officers of the Canadian National Railway went before the Transport Board and said it was impossible of performance. I would like to know what happened to that.

I would also like to know what Order to which they feel they can concede in the city of Toronto.





I would like to know how much, and over what period of time you have spent on steam locomotives, in cutting out the smoke emissions, and the collection of fly ash.

You understand that President Gordon said that you had spent approximately \$1 million, or \$1,000. per machine, and I would like to know how many machines there are, and over what period of time that money was spent, and what has been done for the thousand dollars spent on each machine.

I would like to know what kind of coal you use, where you obtain it, and what its qualities are.

I would like to know how many steam plants you have.

I would like to know how many have been converted, converted from what to what, and over what length of time.

I made these desultory notes as we went along.

MR. DINGLE: That is, just in Ontario?

MR. MACAULAY, Q.C.: Yes sir. I have not much interest in other parts of the country.

There may be a few more things I would like to know, a little later on.

MR. MURDOCH: That sounds like an Opposition



question in the House, to me.

MR. VAUGHAN: Mr. Macaulay, I think you said when you were speaking of diesel fumes -- and this is my interpretation of the phrase you used -- that you were not sure that would cause any abatement of pollution itself?

THE CHAIRMAN: He said the dieselization was not the complete answer.

MR. VAUGHAN: Upon what do you base that?

MR. MACAULAY, Q.C.: I have been studying this for five years quite extensively, on my own, and my conclusion is there is a mistaken impression at large that air pollution consists of the black smoke you can see, whereas, in fact, we have learned from scientists and engineers who have devoted time to this study that there is also great inherent danger in the air from things you cannot see, rather than the things you can.

MR. ELLIOTT: Orsmell.

MR. MACAULAY, Q.C.: Yes, perhaps or smell. You are considering it more from the standard of life than perhaps health, but from the point of view of dieselization, I understand that in the city of Montreal, there have been a great many complaints.

I am not identifying your railway as such; I am simply pointing out that with diesel engines, you



may get rid of one problem, but into another one, like jumping from the frying pan into the fire.

THE CHAIRMAN: I think one of the answers we received was in the city of Philadelphia. They have twenty-two railroads entering Philadelphia, and I am sure you are all familiar with the fact that Philadelphia is one of the large railroad centers, and at the time they were operating with coal, we asked the smoke abatement officer how many complaints he received, and he said, "From 50 to 60 per day".

But now they have dieselized, and we asked him about the complaints, and the smoke abatement officer told us they were only getting 2 or 3 a month.

MR. BELYEA: Mr. Chairman, may I add to that, that it was probably with the new equipment. They did not have a chance to deteriorate, but we felt that when the diesels did deteriorate, there would be a serious emission of aldehydes, and by the time they secured greater use of the diesels, in some cases they have become very objectionable.

We know of one chap from Hungary, who dealt with diesels over there, from an air pollution point of view, and he told us that was one of the serious problems.

THE CHAIRMAN: But the information coming from





the air pollution people showed it is not so serious.

MR. BELYEA: When they switch over to a thing like that, a good shop is very essential, and the problem with which we are concerned is the change in facilities and equipment, which if not made up to standard, may bring about very serious problems from the dieselization point of view.

I was just looking forward to the future. I want to know what is being done to study emissions and if they are cognizant of the hazards and troubles involved.

We know that in Montreal there have already been complaints in regard to the odours from diesel locomotives.

MR. GORDON, M.P.P.: The Toronto-Hamilton-Buffalo railway has a switching yard in Brantford, and it passes along a residential street, and during the time the old steam locomotives were going, they did have considerable trouble with their washings, and they had to re-wash their clothes. They felt that was all right, and perhaps could not be helped.

But since they have had the diesels running by, their washings seem to get little black spots on them, and when it rains, there is a brown stain appears, and it does not wash out. The old smoke soot would



wash out.

So the ladies are becoming very careful, and are turning to dryers, and do not hang their clothing out as much as they formerly did.

MR. MACAULAY, Q.C.: Of course, there are a few penalties you have to pay for industrialization.

MR. VAUGHAN: I think the same principle would apply to vehicular traffic in the cities. This is just part of it.

MR. MACAULAY, Q.C.: That is right.

MR. GORDON, M.P.P.: As Mr. Macaulay said, there may be more air pollution in what you do not see, than in what you do.

MR. DINGLE: It is rather interesting to note that our consumption of diesel bunker sea oil which is a light oil for furnace use, only comprises about 4 percent. of the total used in Canada.

MR. MACAULAY, Q.C.: You are right, and President Gordon was right, when he said this morning that the railways, because they are sort of attractive things, are blamed for a greater share than they actually contribute.

MR. VAUGHAN: May I make a point in addition to what Mr. Dingle said? That is, that the four percent. was diminished still further, when we compared



the time of operating in the urban centers, with the running time in the country.

MR. MACAULAY, Q.C.: Fifteen years ago, there was a public hearing before the Railway Board about the Canadian National roundhouses. I have some notes on it in my office, and I wonder if you have a copy of the transcript of what went on, and if you have, whether we could secure a copy of it.

Then there is the Order by the Board for the city of Montreal. Is that working satisfactorily in Montreal, and is Montreal happy with it?

Those are two other things upon which I would like to secure information.

I think, Mr. Chairman, if it would be of any assistance to Mr. Dingle, I would be happy to work out a list of specific questions, instead of taking up his time this morning. I would like to prepare a list of these questions in a little more intelligible order, so they will not be "loaded" as the hon. member for Essex suggested (Mr. Murdoch), like the question, "When are you going to stop beating your wife?". I am familiar with this subject, and you now know where I stand, openly, and I hope fairly, and I do not think the railways have done as much as they can, and while I will try not to make my questions "loaded", I



would like to ask some questions, and write them, and send them to you. That can be sent with a copy of the transcript.

MR. DINGLE: That will be very helpful.

MR. MURDOCH: We appreciate all the information we have received this morning. We are serious in the work we are doing, because we have heard scores and scores of people giving evidence first-hand that they are suffering from smoke from the railway engines.

We have gone out and observed the damage which has been done, and we have found that the damage from the effects of this smoke and other pollutants, runs into many millions of dollars.

The point is that these people, of course, collect the dust and the fly ash which is emitted with the smoke, and it is a real nuisance,

If I were to pick up something on the street belonging to the Canadian National Railway, and it was plainly marked, and I did not return it, I could be fined for stealing, perhaps. You would expect it to be returned, if it was your material; and sometimes I wonder if it would not be a good idea -- inasmuch as this trash in the communities, apparently is your property, why it would not be a good idea for some of these people to take their vacuum cleaners, and pick





up this dust and fly ash until they had about 100 pounds in a sack, and then come into one of the railway official's office and say, "Mr. So-and-so, this is yours; I do not know where I shall put it, nor I do not know whether you want it back, or whether you can re-burn it, but it still might be of value to you. It is yours."

I think from what I gathered this morning your interest has been just as much from the point of view of economy in getting the best possible heat units from your fuel, rather than to help on the air pollution part of it. However, the two are definitely tied in together.

MR. VAUGHAN: I think we have been talking more about the things you can see. Mr. Macaulay has been speaking about the kind you cannot see.

I have read somewhere that your air pollution in Ontario can not be sufficiently identified as emanating from trains. I do not think it is the intention of your Committee to sort of isolate this matter as purely a railroad problem. I gather from your arguments that is not your purpose.

MR. MORNINGSTAR: Oh, no.

MR. MURDOCH: It is only one part of it.

MR. MACAULAY, Q.C.: But certainly a bag, or



some similar agency, on the top of a stack, would seem to show that it could not be from anything else.

MR. BELIEA: There is this one point about the whole thing: while this is a serious problem, everybody says, "Why should we take action when the railways are offending, as they are?". That really is hindering our whole problem of air pollution throughout the province. If there is something wrong to which we can point --

THE CHAIRMAN: President Gordon refuted that statement. He said the Canadian National was the leader --

MR. MACAULAY, Q.C.: We will know when we receive the report of the tests which they have carried out.

MR. VAUGHAN: Have you any idea of the samplings taken in the winter in Toronto, as to the extent of air pollution?

MR. MACAULAY, Q.C.: Yes, we do.

MR. VAUGHAN: What does that show?

MR. MACAULAY, Q.C.: I do not have the figure in my mind, and I am not mathematician. The reason I have become so alarmed is that there has been as much as 132 tons of fly ash falling per month, and landing on one square mile in my riding.



The Department of Hygiene at the University of Toronto has been carrying on a series of tests over the last seven years, as to the amount of fly ash in the air from something like twenty stations. We are paying money for various things, and I am hoping I can convince the Committee to recommend to the Ontario government that it set aside a certain amount for research work.

I am grateful to you for being able to come to you and stating what I think, and securing information from you.

MR. VAUGHAN: I see, from reading your report, you regard it as a great social problem?

MR. MACAULAY, Q.C.: By no means are the railways the only great offenders. The incinerators operated by the city, some apartment houses, and the motor vehicles must also be held responsible. If these tests could be actually taken, they might show to what extent each is contributing. Certainly, in Los Angeles, they have made a tremendous contribution to the ill health of the people.

THE CHAIRMAN: I think we made it clear to President Gordon that there is absolutely no doubt of the fact that throughout our travels in the province of Ontario, receiving complaints, the railways rate as





the No. 1 offender. There is no question about that.

MR. MACAULAY, Q.C.: In the opinion of those who have said something.

THE CHAIRMAN: The ones who had something to say apparently were interested; the others do not care.

MR. VAUGHAN: As a matter of interest, Mr. Macaulay, may I ask this; in the part of Toronto where there would not be any concentration of fly ash, have there been any tests taken of the air, to ascertain the amount of this unseen enemy about which you were talking?

MR. MACAULAY, Q.C.: No, I do not think so.

THE CHAIRMAN: I think there are dust collectors.

MR. BELYEA: Yes, filter-paper samplers are being put there now.

MR. MACAULAY, Q.C.: The stuff moves around so much that a sample taken at one moment may not be too valuable, as there is no way of collecting it, so far, to show the total amount which falls on an area, but there is a great deal of fly ash.

All we have been able to say, so far, is that at certain times there are certain quantities of certain noxious fumes, acids, and so forth.



MR. VAUGHAN: I think I saw on a television programme, some of the work Ontario is doing in this field.

MR. MURDOCH: I think it is interesting for us to remember that this Committee was constituted mainly to get after the problem of fly ash and black smoke.

In Los Angeles, when we were there, we found there was no problem of black smoke nor fly ash, as there is not a pound of coal burned in the Los Angeles area, hence, there is no problem there.

In many of the places, we found it was a real health problem, which is different from our problem here, altogether.

MR. ELLIOTT: It is the gases?

MR. MURDOCH: That is right.

THE CHAIRMAN: The No. 1 problem is what you see, and No. 2 is what you cannot see. We are, of course, concerned with the extraordinary industrial expansion in Ontario.

Gentlemen, is there anything further about which you wish to speak today, or are there any further questions to be asked? (No response).

If not, we would be very happy to invite you to lunch with us, that is, Mr. Dingle and the



other gentlemen here.

MR. DINGLE: That is very kind of you, Mr. Chairman, but Mr. Wynne and I have to attend another luncheon. Mr. Archibald Boyd is here from the Old Country studying railway conditions and buildings, and things like that, and we have committed ourselves to have luncheon with him.

Some of our men are now conducting him through our shops. Otherwise, we would be delighted, and if you will be good enough to give us a rain check, perhaps we can avail ourselves of your kind invitation at another time.

MR. WYNNE: I do not think we will get anywhere with air pollution -- and I am thinking of gases more than smoke -- by calling each other names. I think it is a national problem and it requires an engineering approach, and it will take considerable time to find a cure, and it is going to become very expensive.

I think the thing to do is to sit down and examine all of the facts available, and secure the experiences from other countries, and other companies, because this is becoming a national problem.

We are, of course, willing to co-operate with you.



MR. ELLIOTT: There is still this problem of the waterfront in Toronto.

MR. DINGLE: That is true, but, on the other hand, I think the big problem is in the larger centers. Still, these same centers have been and probably will continue to be converting from electric street cars to buses.

THE CHAIRMAN: Just complete what you were saying, Mr. Wynne. I think there was something you left unsaid.

MR. WYNNE: What I was going to say has slipped my mind. We were somewhat unprepared for some of the questions you have asked us, but, knowing now your method of approach, I am sure we can give you much more information than at a meeting of this kind.

We have a number of other duties and responsibilities, and to catch us with so many questions, leaves the officers concerned ~~faded~~ with some difficulty.

I want to assure you we will give you every assistance we can in the work in which you are engaged, because, personally, I think it is a very, very, important matter.

Even if it is found necessary for me to go to Toronto to further discuss this matter with you, I will be very glad to go at any time it can be arranged.





MR. GORDON, M.P.P.: We have a great deal of information which might be of help to you.

MR. WYNNE: We will be glad to exchange information. At times, there are economic limits beyond which we cannot go.

I think you must recognize our position.

MR. ELLIOTT: I think we are agreed on that. We have gathered considerable information as we have been going around, which we will be happy to pass on to you, to try and help you people solve your problems. I think it is up to the Committee to help you as much as it can.

I think Mr. Macaulay has brought forward certain important questions, and I am sure things of that sort, in which he is interested, will be of help to the Committee, and perhaps to the Canadian National Railway, as we go along.

THE CHAIRMAN: I would like to say that we appreciate your interest and co-operation, and the further information you are going to give the Committee, and it is nice to know you are taking such an interest in the problem on a national basis.

I know the Committee feels that the outcome of our recommendations to the provincial government in the province of Ontario will have a very far-reaching



effect, not only in Ontario, but in other provinces of Canada as well. So I am sure you gentlemen realize, -- as you must, from the discussions this morning -- that this is something we are not just "playing around with", but we are endeavouring to get the right information from the right people.

This is a problem in which I have been interested for quite a number of years, because I live very close to the Lambton roundhouse in Toronto, and this is the first opportunity we have had of speaking with the "top brass" of the Canadian National Railway, whom I am sure can give us some of the answers we require.

MR. DINGLE: We appreciate the way you have put this. I can assure you that we will do everything we can to help you.

THE CHAIRMAN: If that is all, gentlemen, we will adjourn.

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---Whereupon at 12:10 o'clock p.m., the further proceedings of this Committee adjourned, to reconvene in the city of Toronto on Monday, December 10th, 1956, at two o'clock in the afternoon.

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